PALESTINE EXPLORATION QUARTERLY

Embodying the *Quarterly Statement* of the Palestine Exploration Fund and the *Bulletin* of the British School of Archæology in Jerusalem

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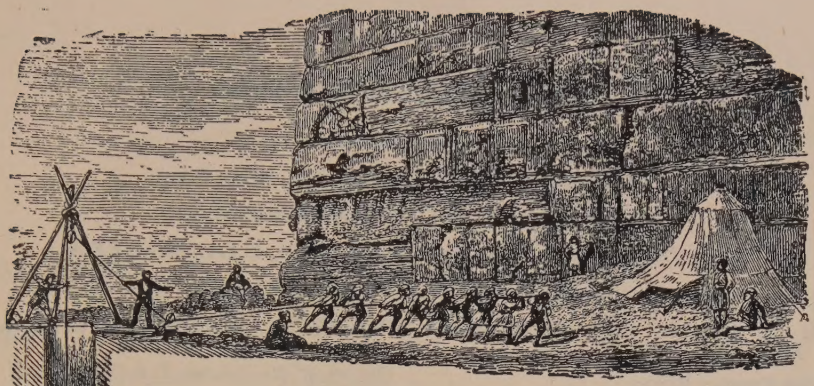

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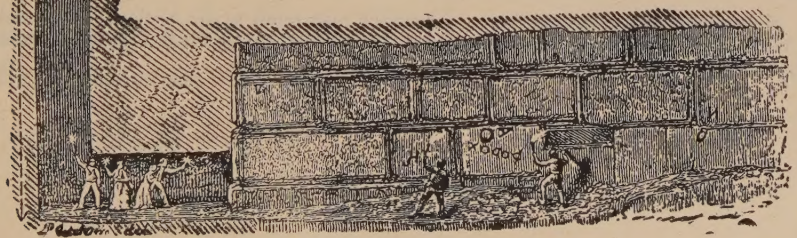

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THE PALESTINE EXPLORATION FUND

NOTES AND NEWS

The riddle of the copper rolls found in cave 3Q at Qumran continues to intrigue the learned world. At present, like the sealed book in the Apocalypse, no one can open the rolls, and they lie under a glass case exposed to view in the Palestine Archaeological Museum. Various suggestions have been made concerning their contents and purpose. The view has been put forward that they are a proclamation, connected with the Bar-Kokhba revolt, and intended to be displayed in a public place. A learned friend has made the suggestion to me privately that they had a magical significance, adducing the parallel of similar rolls in the British Museum. In the *Revue Biblique* for April, 1954, Dr. K. G. Kuhn has produced a new and ingenious theory. It has already been mentioned in this journal that some of the writing on the rolls, having presumably been made with the point of a stylus on the thin copper sheets, is visible in reverse on the exposed back of the rolls. Dr. Kuhn, from his study of what is visible of the script, and from his careful measurements of the length of the rolls has arrived at certain provisional conclusions. (1) The text is Hebrew ; (2) it is not a biblical or religious text ; (3) what he has been able to decipher shows frequent occurrence of measurements in figures, giving lengths and depths ; (4) from the fact that the text is arranged in columns like the leather scrolls, and that the rolls would together constitute a long roll about the usual length of a biblical scroll, he argues that such a shape and arrangement of text would be quite unsuitable for public display. On the basis of these deductions he has put forward the interesting suggestion that the community was probably a wealthy one, and that, foreseeing the storm and disasters that would follow in the wake of the revolt, hid their possessions in various secret places and prepared an inventory with detailed descriptions of the hiding-places. This was made on a more permanent material than leather, and was then buried in the cave furthest from Qumran, so that when the calamity was overpast, those members of the community who survived, or their descendants, might return and recover their property and restore the community to its ancient way of life. The theory is certainly attractive, but must await the test of the unrolling of the sealed book, if that ever becomes possible.

The same issue of the *Revue Biblique* also contains articles dealing with other documents found in the Qumran caves. With one of these, the Beth-Mashko document, Dr. Birnbaum will deal in the next issue of the PEQ.

A well-known Jewish scholar, Dr. Raphael Patai, the author of *Man and Temple*, and other important books, has recently published a book of unusual interest entitled *Israel between East and West.* It deals with a problem which has wider implications than a purely national issue. The population of the new state of Israel is about equally divided between Easterners and Westerners. Jews from western countries came first and implanted a western mechanized civilization upon Israel ; later came a large influx of Yemenite and Iraqi Jews bringing with them a totally different attitude towards life. Professor Patai suggests that this meeting between East and West is a special opportunity created by the unparalleled historical necessities with which Israel is confronted. The synthesis of the Orient and the Occident can accomplish a great deal in helping the new country to find its own fulfilment. Professor Patai believes that Israel can play a role out of all proportion to her size, that she can show the way to a synthesis of spirit and matter, and that, as in the distant past, she can again become the Light of the Nations. One can sympathize with such a noble vision, but how remote seems its fulfilment in the lurid light of internecine border warfare.

Those who have been following the reports of the Mari excavations will be interested to know that the well-known French assyriologist, Professor C-F. Jean, who has been one of the editors of the Mari texts, has published a useful resumé of the result of the six campaigns at Mari before the war. His commentary will gather up the fresh light which this important series of excavations has thrown on an obscure period of the history of Mesopotamia, a period which has links with the beginnings of Hebrew history. The volume is entitled *Six Campagnes de Fouilles à Mari* 1933-1939. (Cahiers de la Nouvelle Revue Théologique IX.) Tournai-Paris 1952, Casterman. 57p. 50bfr.

In *Syria*, XXX, 3–4, is given the report of the eighth campaign at Mari. The most important result of this season's work was the discovery of a new temple, that of the goddess Ishtarat. This temple had contained a very large number of statues, large and small, which had been savagely mutilated in the destruction of the city. By skilful repairing several of the statues have been reconstructed, and two more names of kings of the dynasty of Mari, hitherto unknown, have been recovered, namely, those of Itur-Shamagan and Iblul-il. One of the restored pieces was the statue of a seated figure dedicated to Iblul-il, bearing the name of Ur-Nanshe (or Ur-Nina), a court-musician and dancer. This is a very remarkable and beautiful piece of statuary. Professor Parrot considers the problem of who was the author of the savage destruction of the city in the middle of the 3rd millennium B.C. The names of Sargon and of Lugal-zaggisi have been suggested, but the answer must await the discovery of more historical tablets. As M. Parrot remarks, " Mari is far from being exhausted and no one can foresee what revelations it may still contain."

Professor Schaeffer's 16th campaign at Ras Shamra in 1952 yielded a large number of new tablets, 150 of which were Akkadian, and 40 were in the alphabetic script. The greater part of the Akkadian texts were contracts, but only two contracts were in alphabetic. The inference from this would seem to be that Akkadian was the language used for legal and diplomatic business, while the language of the alphabetic texts, usually called Ugaritic, was the popular tongue. Various points of interest arise from these new texts. The name of the Egyptian god Amon, and the mention of Egyptians, occur for the first time in Ugaritic documents. One of the letters is concerned with the king of Ugarit's demand of 2000 horses from one of his vassals. This is surprising, both with regard to the large number required, and to the fact of the very recent introduction of the horse into Mesopotamia. Another interesting point is a reference to the distribution of wine among Egyptians and Assyrians, indicating the existence of Egyptian and Assyrian settlers or colonists in Ugarit. A discussion of these new texts is to be found in the above-mentioned issue of *Syria* from the pen of Professor Virolleaud.

The January issue of *Vetus Testamentum* contains an interesting note by Professor Edward Ullendorff on a constructional detail of Noah's ark. In Gen. vi, 14, the Hebrew word *qinnim* (' nests ') occurs and is translated by the R.V. ' rooms.' The word is elsewhere in the O.T. always used of birds' nests, and its use here seems somewhat strained. There is also the syntactical difficulty that the usual Hebrew distributive repetition is omitted, and also the point that the mention of the internal structure of the ark occurs in connection with directions for the external pitching of the ark with bitumen. The word had evidently been a difficulty to early commentators and translators. The author of the note suggests that a slight alteration of the pointing to give *qānim*, ' reeds ', would remove the difficulty. He goes on to remark, " This minor change involving the pointing of the word only would restore to v.14 its original character of giving building instructions in the most general terms and leaving all details to the two following verses : ' Make thee an ark of gopher wood, with papyrus reeds shalt thou make the ark . . . ' And the hull is then to be covered with bitumen. Reeds were the most essential material to give cohesion to the wood ; they were used in ancient shipbuilding for filling the gaps and crevices and for tying together the trunks as well as for the purpose of giving the whole structure buoyancy ".

Israeli archaeologists have been continuing the excavation of a temple of Astarte of the Hyksos period near Acre, which was begun in 1947. The excavation this summer, directed by Mr. Dothan, with the assistance of Dr. Helene Kantor of the University of Chicago, has unearthed a semi-circular stone building which is thought to have been a Canaanite high place. Many figurines and ritual vessels have been discovered. The excavators regard this as the most rewarding Canaanite high place to be discovered

in Israel, the only comparable one being Megiddo. It is hoped to continue the excavations again in October.

Miss Olga Tufnell has organized a series of lectures at the Rooms of the Fund at 2, Hinde Street, Manchester Square, of a popular character on various aspects of Palestinian archaeology. It is hoped to interest by this means the younger generation in biblical archaeology. She has been fortunate in securing Sir Leonard Woolley to deliver the opening lecture early in October. The lectures will continue throughout the autumn.

Our readers will be interested to hear of an archaeological exhibition, under the title of "*From the Land of the Bible*," which will be opened at the British Museum on and from October 26th. It is designed to illustrate the religious and cultural development of Man in the Holy Land through many centuries, with particular emphasis on the background of the Biblical Story.

Among the highlights of the Exhibition will be some pages from the Dead Sea Scrolls, part of the famous mosaic pavement of the synagogue of Beth Alpha, and some amulets and implements from the newly discovered culture near the Sea of Galilee. An illustrated brochure containing full information about the Exhibition can be obtained from the Secretary, 13, Mansfield Street, W.1.

EXCAVATIONS AT JERICHO, 1954

By Kathleen M. Kenyon
(Director, British School of Archaeology in Jerusalem)

The third season's excavations at Jericho lasted from January to the beginning of April 1954. The expedition this year was sponsored only by the British School of Archaeology in Jerusalem and the Palestine Exploration Fund. The American School of Oriental Research had not the senior archaeological staff available to collaborate as hitherto, but the School made a welcome donation to the funds of the expedition, and members took part in the work, amongst whom we were glad to welcome the Director, Professor J. Muilenberg, for such time as he could spare.

The major contribution to the funds was once more made by the British Academy. Very substantial contributions were made by the Ashmolean Museum, Birmingham City Museum, the Russell Trust, Sydney University and the Australian Institute of Archaeology. Support was also given by the Cambridge Museum of Archaeology and Ethnology, Liverpool University, London University, Trinity College, Dublin, and the Universities of Glasgow, Leeds, Reading and Edinburgh. A welcome piece of assistance came from Imperial Chemical Industries, in the gift and free air transport of a supply of acetone. Thanks are also due to Professor S. Zuckerman and his assistants in the Anatomy Department of the University of Birmingham for their continued collaboration in the examination of the human skeletal material.

The staff averaged twenty-two, mainly British, but in addition to two students of the American School who worked for the whole season, two other Americans took part, and a French student was present for a short time. Two members of the Jordanian Department of Antiquities also took part. The thanks of the Committee are due to all for much hard and excellent work.

Once more, every help and facility was given by the Jordanian Department of Antiquities. The Committee is most grateful to the Department for permission to excavate and for loan of equipment, and to the Director, Mr. G. L. Harding, F.S.A., for his unfailing interest in the work. Thanks are also due to the Palestine Archaeological Museum for loan of equipment and other help.

For the last fortnight of the season, Professor F. E. Zeuner of the University of London Institute of Archaeology joined the staff to study problems of environment and other related matters. His examination of the problems in connection with environment in the Neolithic period, with soil layers and

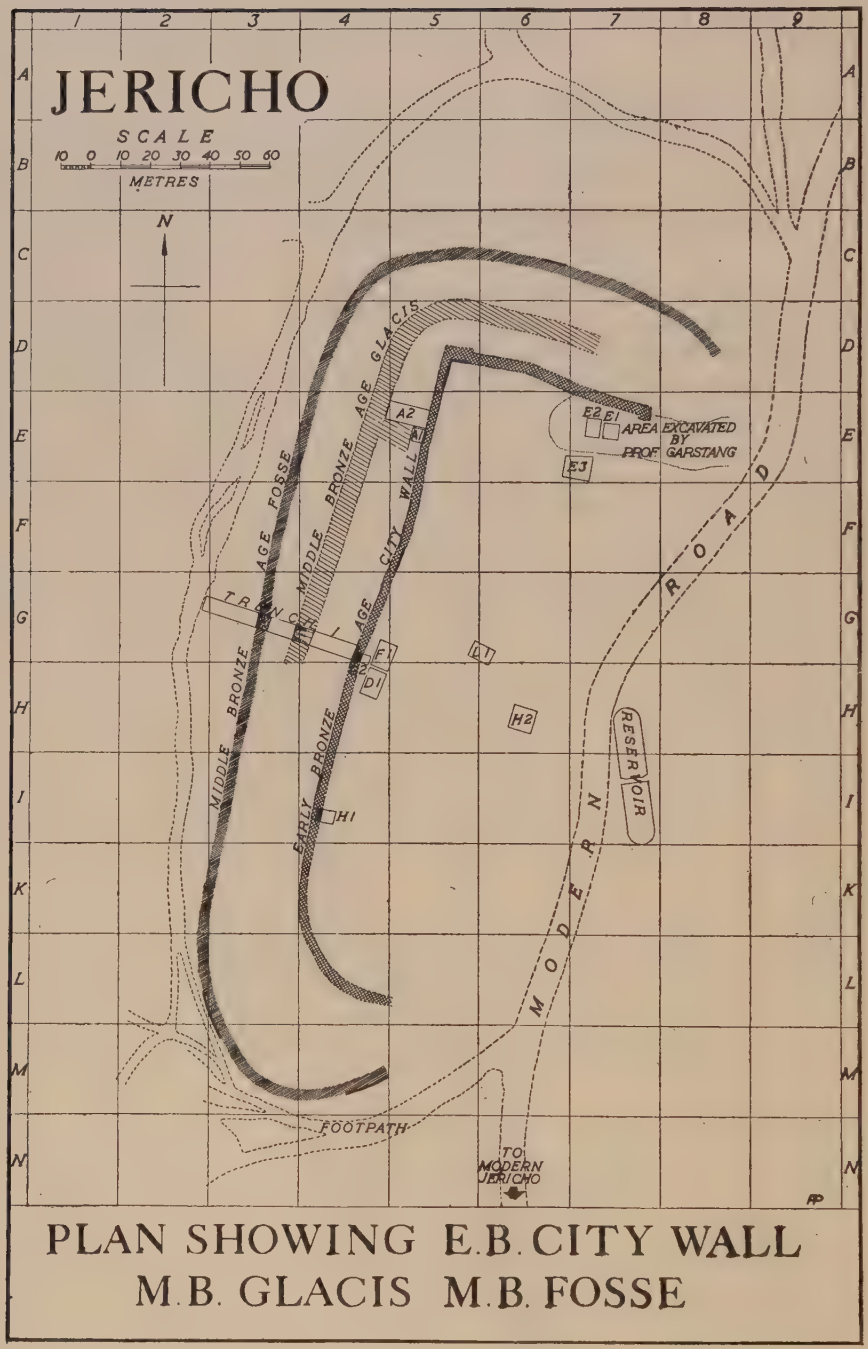


Fig. 1. Plan of Tell.

with preservation of materials in the tombs was invaluable. His report on the formation of a soil layer on the tell follows this article, and reports on other matters are to appear later.

Work on the tell continued in all the main areas begun in earlier seasons. The results hitherto obtained have directed attention to four main problems. Chronologically, the first is the extent and character of the earliest, pre-pottery, Neolithic settlement. Its extension over at least half the tell has been established, and a superimposed succession of characteristic houses has been excavated in site D-F (Squares G4-H4) and E (Square E7). An imposing wall apparently surrounding this settlement was discovered in Site G, and the clearance and deepening of part of the great German trench across the mound was begun in Site M.

The second major problem on which light has been thrown is the succession of the Early Bronze Age defences of the site, roughly covering the third millennium B.C. The great complexity of these defences was established in Trench I, where seventeen successive phases were identified (P.E.Q. 1953). The third problem, that of the lay-out of the Early Bronze Age town, is being examined in Site E, immediately to the south of Professor Garstang's deep trench, in an area which it is hoped to link up with the northern section of that site, and thus to extend the area of Neolithic houses exposed.

The fourth problem which has been studied is that of the Middle Bronze Age town. The defensive system has been elucidated in Trench I. The only area in which houses of this period have been found to survive is on the eastern side of the tell, in Site H, and here some houses opening off a street running up the mound are in process of excavation. A fifth problem, of course, is that of the occupation of the Late Bronze Age, the period of the attack by the Israelites; on this the 1952 and 1953 seasons had thrown no light.

The Neolithic Period

In Site E, the clearance of the successive building levels was continued. An average depth of 3 m. has been reached (below the level at which Professor Garstang's main clearance was suspended) over an area of 70 square metres, and nine main building stages have been identified, with a considerable number of subdivisions indicated by minor rebuildings. The work has proceeded slowly, as the structures are complicated in plan, and the tracing of the walls and their disentangling from the fallen mud-brick within the rooms requires very careful work. The plan of all the stages revealed so far is basically similar. In the central part of the area at all stages is a courtyard, in which there are a series of hearths, with buildings to the east and west. In the area so far excavated, it is not yet clear whether the courtyard divides adjacent buildings, or is an interior courtyard of a single building; this should be revealed when the area to the south is cleared to these levels.

A trial trench was sunk in the courtyard area in 1953 in an endeavour to reach the base of the deposit. What was probably the lowest of the series of similar buildings was reached, with a deposit of a different sort below. This year work was continued down in this trench. Advantage was taken of the presence of Dr. Dorothy Garrod in Jordan to persuade her (though little persuasion was required) to supervise this work, so that we should have the benefit of her opinion as to whether mesolithic deposits had been reached. A depth of 5 m. was reached below the level from which excavation started in 1952, that is to say of level of — 0·95 m. with reference to the datum of the top step of the reservoir at the spring (used by the German expedition and Professor Garstang). There was undoubtedly a change in the type of the deposit, for the characteristic flint industry of the upper levels was missing. In Dr. Garrod's opinion, however, none of the flints could be described as typically Natufian. At the base of the trench a structure and floor was reached, and work was suspended, as it was desirable to clear it further before cutting through it.

An interesting find in one of the house levels excavated is a miniature figure undoubtedly of the mother-goddess type. The head is missing, but the figure is otherwise complete. She wears a long gown gathered at the waist, and her arms are akimbo with the hands clasping the breasts. The delicacy and minute size of the figure is shown by its comparison with the hand in which it is held (Pl. XVI, 2).

In Sites D and F, work was continued to the rear of the great stone wall. It was established this year that a building of the type characteristic of the period, with plastered floors and walls, and a plan with wide doorways between round-ended nibs, was contemporary with the stone wall, which, though there is little doubt that it was primarily defensive, also acted as a revetment to a platform on which the house stood. During the lifetime of the house, the superstructure of the stone wall appears to have collapsed twice. After the first collapse, the wall was rebuilt on the same line, but after the second the house was extended over the resultant fill, to run up to a later wall 6 m. further west (see Section Fig. 2).

Excavation beneath the floor of this house throws suggestive light on the reasons for the construction of the great wall. Beneath the floor of the house, and overlaying the debris of collapse of an earlier house, were skeletal remains representing a large number of individuals. Burial beneath the floors of houses seems to have been the normal practice in this period; several burials were in fact also found in Site E. But the number of individuals in this particular deposit was very large. Some were buried as intact bodies in a crouched position (Pl. VIII, 1); one was prone, with the head facing forwards, and the skull of another individual beside it, giving a bizarre appearance of a two-headed swimming monster (Pl. VIII, 2). But the majority of the bones were in disorder (Pl. XI, 1). It was clear that they were collected together when the decomposition of the bodies was in an advanced state, but not complete, for limbs were found in articulation

but detached from the rest of the body. In the foreground in Pl. IX, 1, for instance, are two legs belonging to the same individual, each articulated, including the small bones of the feet, but placed the opposite way up.

The excavation of these bones presented a very difficult problem owing to their extreme fragility. Accurate statistics were obviously important owing to the rareness of such early skeletal material, but it early became apparent that it would be impossible to lift the majority in such a state that measurements could be taken. An S.O.S. was therefore sent to Sir Mortimer Wheeler, Secretary of the British Academy, and he, with great rapidity arranged that Dr. Ian Cornwall of the Institute of Archaeology, with the kind permission of the Director, Professor Childe, should come out to measure the bones *in situ*, his expenses being defrayed by the British Academy. The Committee is most grateful for this generous help, and to Dr. Cornwall for making the journey at such short notice.

The dismembered condition of the majority of the bodies renders the calculation of the number of individuals represented a complicated business. Dr. Cornwall's preliminary estimate was thirty-one. Such an accumulation of corpses suggests some disaster, such as an earthquake, disease or a massacre. The evidence does not suggest an earthquake, for the bodies were lying above and not below the ruins of the earlier house. The bones were too fragile and fragmentary for any injuries to be identified, so the alternatives of disease or massacre cannot be settled in that way. But it is suggestive that when the bones were buried beneath the floor of the succeeding house, the precaution was taken to protect the settlement with the massive stone wall, which would make a preceding disaster associated with a massacre a reasonable hypothesis.

These skeletal remains also throw light upon another previous find, that of the remarkable plastered skulls found in 1953 (P.E.Q. 1953). These were found in a discarded pile beneath the floor of the next succeeding house. That is to say, they had been treasured in the house beneath which the bodies were buried, and were discarded when that house went out of use. It therefore seems reasonable to assume that the skulls were derived from the bodies in question. This accords with the fact that a number of the bodies lacked a cranium, though the mandible was often there (Pl. IX, 2), while in only one of the plastered heads was the mandible present. It would therefore appear that before the bodies were sealed beneath the floor, a number of the crania were removed, and were preserved as relics, with features restored in plaster, in the succeeding phase.

This hypothesis again accords with the known facts. It does not, however, settle the question of whether the heads were preserved as venerated ancestors or as trophies. If the house was built by survivors of the presumed massacre, the heads might be those of venerated ancestors, if by the conquerors, they might be heads of victims preserved as trophies.

When the massive stone wall was cleared in 1952 and 1953, it appeared to represent the earliest-but-one stage in the history of this part of the site.

Fig. 2. Section of east end of Trench I, with schematic section of whole trench to indicate position.

Pl. VII. General view of Trench I, looking west towards the Mount of Temptation.

Pl. VIII. 1. Neolithic Skeleton.

Pl. VIII. 2. Neolithic Skeleton with second skull beside it.

Pl. IX. 1. Collection of limbs.

Pl. IX. 2. Neolithic skeleton with skull removed.

Pl. X. Large Neolithic building, possibly temple, from east.

Pl. XI. 1. Large Neolithic building, possibly temple, from west.

Pl. XI. 2. Central basin in large Neolithic building.

Pl. XII. Neolithic town wall, with earlier one beneath it.

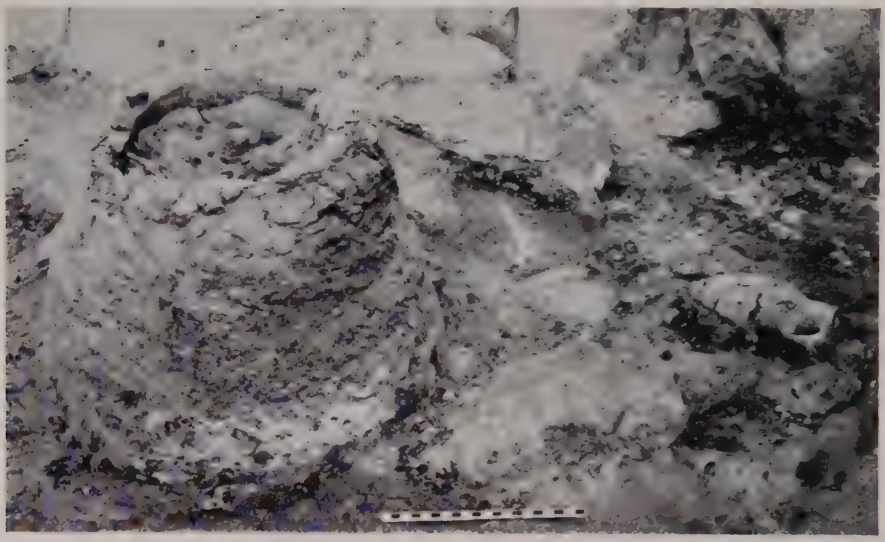
Pl. XIII. 1. Building of Intermediate Early Bronze-Middle Bronze period.

Pl. XIII. 2. Foundation cist with infant bones, beneath E.B.-M.B. building.

Pl. XIV. Stone revetment at foot of latest Middle Bronze Age defences.

Pl. XV. 1. Middle Bronze Age houses and street in Site H.

Pl. XV. 2. Late Bronze Age floor in Site H.



Pl. XVI. 1. Oven and juglet on Late Bronze Age floor.

Pl. XVI. 2. Miniature Neolithic mother goddess figurine.

Pl. XVI. 3. Miniature wooden juglet from Middle Bronze Age tomb.

Pl. XVII. 1. Burial of Middle Bronze Age Warrior.

Pl. XVII. 2. Bronze belt, axe-head and dagger from warrior burial.

Pl. XVII. 3. Bronze belt *in situ*.

Pl. XVII. 4. Beaker in form of ram's head from warrior burial.

This, however, proved to be far from the case. Beneath it was found in 1953 a structure with curved walls, which was thought to represent a primitive stage of architecture, the first on the site, and resting on bedrock. In both respects this was incorrect.

The curved structures turned out to be annexes to a large-scale building, with a central rectangular room 6 m. long and more than 4 m. wide, the largest Neolithic room in fact found, with an excellent floor of the burnished plaster typical of the period (Pls. X and XI, 1). At the far end of this room were balancing annexes with curved walls. In the centre of the large room was a small rectangular basin (Pl. XI, 2), beautifully constructed with a facing of the same burnished plaster, strongly scorched with fire. The scale of the building and its plan, both unparalleled in the Neolithic buildings so far excavated, and the central basin, all suggest some ceremonial use, and it seems possible that in fact the building was a temple.

Beneath this structure was the level which had been presumed to be rock. It was actually a thick floor of white-plaster. Beneath it was a tipped fill which covered the outstanding find of the season, a yet earlier town wall of the pre-pottery Neolithic period, which in construction, surviving height and chronological position puts the other one completely in the shade (Pl. XII and Section Fig. 2).

This wall is based on undoubted bed-rock, at a depth of 14·50 m. from the surface at this point and at −·25 m. in relation to the datum point. Its surviving height is 5·50 m., in two separate stages. It is well-constructed, on a batter, of undressed but regularly arranged stones. The size of the stones used does not equal that of the later wall, but it is more evenly built, without the bulges which occur in the latter. A portion of the face is covered with mud-plaster, but it is not clear whether this is a strengthening patch, or whether it had originally covered the whole face. On the south side of the trench there appears to be a rock-cut external ditch, but this level was not reached on the north side, and it is therefore not shown on the section.

The implications of this find are far-reaching. It adds many metres of deposit, and therefore probably centuries of time, to the length of existence of the settlement of the pre-pottery Neolithic phase. The surprising depth of deposit of this period is emphasized by the diagrammatic sections of the tell (Fig. 2), which show the extent to which the accumulations of this period have contributed to the present height of the mound.

Secondly, the history of the settlement as a town, occupied by an organised community, is carried back still further. A town wall existing at the stage of the first-discovered wall, well back in the pre-pottery phase of the Neolithic, was surprising enough, and the new find shows that this development occurs yet earlier. The number of years to be assigned to each building phase is of course uncertain, though one would not expect buildings as solid as those of the period so far uncovered to decay very rapidly. Between the two walls are four stages (see Section, Fig. 2), that of the house above the ruins of which lie the skeletons, that of the large building which is possibly

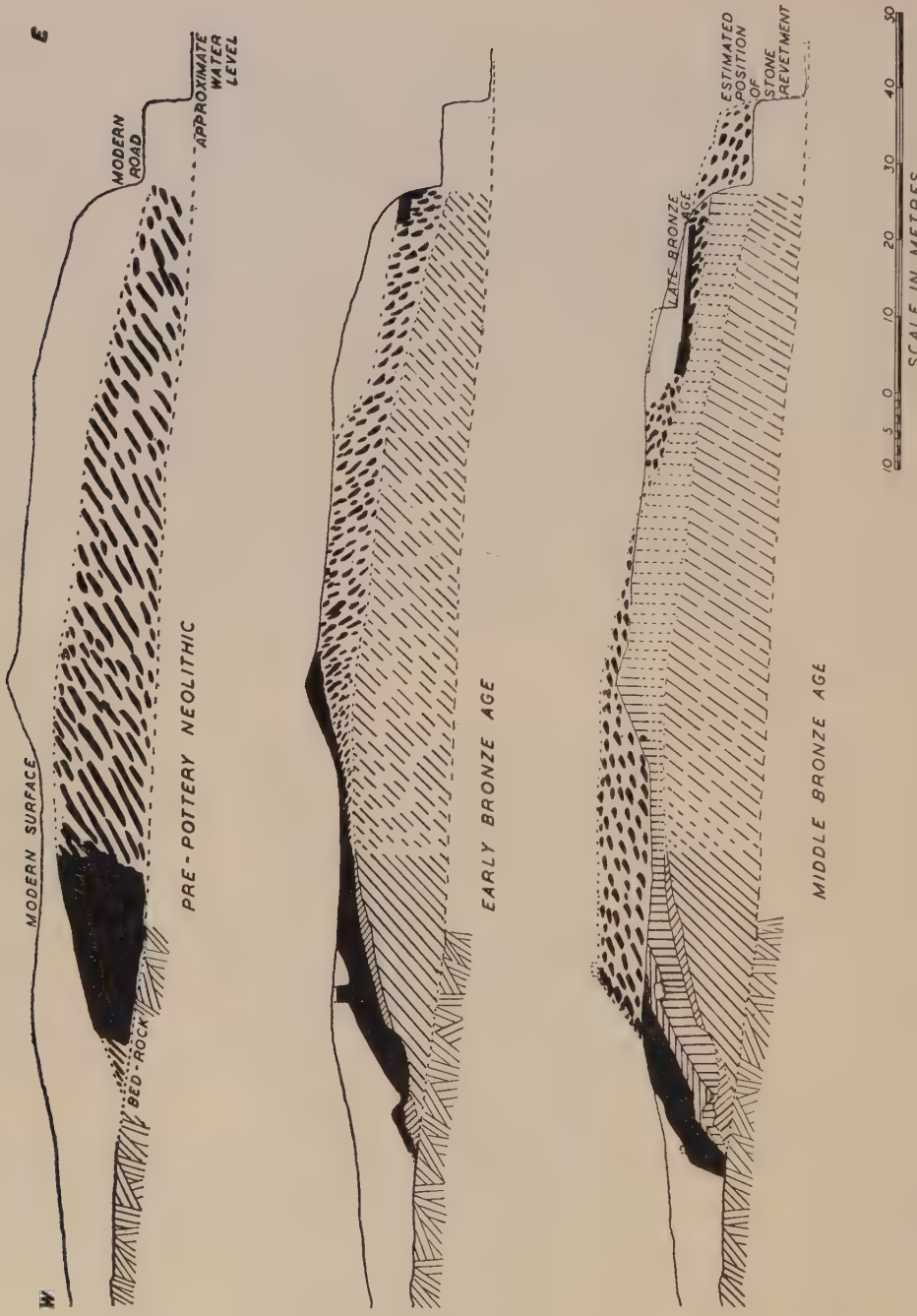


Fig. 3. Diagrammatic section through tell to illustrate the accumulation of the different periods.

a temple, that of the thick, white floor beneath, partly destroyed when the succeeding structure was built, and that represented by the great tip of material which covers the earlier wall. A considerable amount of charcoal has been recovered from several of these layers, and Carbon-14 tests now in progress should establish the absolute age shortly. The wall, of course, does not represent the first occupation of the site. Like the later wall, it is obviously built against a core of material derived from earlier structures. The excavation of this great depth of early material is one of the major tasks of subsequent seasons' work.

Thirdly, it is now clear that there is no natural hill beneath the existing mound. The general slope of the rock has now been established in Trench I (Section, Fig. 5), and the diagrammatic section (Fig. 3) shows that this same slope must run on down to the level of the spring on the east side of the tell. The whole of the mound therefore represents the debris of human occupation, and the greater part of its surviving height is made up of layers belonging to the pre-pottery Neolithic phase.

The excavation to date of Trench I and the adjoining areas and of Site E has given an indication of the character of the Neolithic occupation of Jericho before the appearance of pottery. It has shown the great length of occupation of the phase, its highly-developed character, and that it extends over at least approximately half of the area of the present tell. The principal outstanding problems concerning the pre-pottery Neolithic period are in the first place the examination of the still earlier levels, and in the second place the tracing of the size of the settlement and the lines of the walls.

It was with a view to obtaining evidence about the line of the walls that a portion of the great German trench across the tell was re-opened, at about 30 m. north of Trench I (Site M.I). It was found that the German excavation had in fact penetrated many metres into the pre-pottery levels, though the character of the deposit was not recognised. In the remaining area, a useful succession of Early Bronze Age levels, contemporary with various stages of the city walls, has been excavated, as well as levels of the pottery Neolithic stage, and the clearance of the pre-pottery levels has been begun.

It is, however, clear that it would be an impossibly lengthy procedure to trace the line of the walls by successive exploratory trenches all round the tell, for even the top of the latest wall lies at about 5 m. below the surface at a place where the surface is lower than anywhere else on the west side of the tell. Therefore, the only practicable course is to try to establish the maximum extension of the occupation of the period, and to hope that in the process indications will be found of the course of the walls. The excavations in Site H.II, now extended to twice the size shown on the plan, will in due course test the extension of the levels in the centre of the east side of the tell, while Professor Garstang's trench has already proved their existence in the north-east corner. To establish the northern and southern boundaries, two new trenches have been begun, in Squares D6 and L4—M4. So far, these

trenches have penetrated only levels of the Middle and Early Bronze Ages, and in so doing are providing useful confirmatory evidence of the defence sequence of these periods. It is, however, a hopeful sign that the fill behind the revetment of the Middle Bronze Age at the south end of the tell contains Neolithic pottery, no doubt derived from an adjacent area. As all the evidence suggests that this phase was considerably less important than the pre-pottery period, there seems to be a good chance that the occupation of that period will prove to have extended to this area.

In addition to the work on the pre-pottery Neolithic levels, further light has been thrown on the Neolithic stage in which pottery appears. As it becomes possible to correlate levels in different areas, it begins to appear probable, though not yet certain, that there are two main stages in the occupation of this period. The first stage is occupation on the ruins of the pre-pottery settlement, the surviving evidence of which is hearths and surfaces, but only very slight traces of structures. The next stage is the digging of the innumerable pits into the underlying debris of the pre-pottery stage, which is such a constant feature of the junction of the levels belonging to the two periods. The pits are filled, and the area levelled over, with very loose rubble, in which is much Neolithic pottery. Above are structures built of the bun-shaped bricks which are typical of this phase. The most probable explanation of these pits is that they were quarries to obtain material to make mud-bricks. The stones would be what was sieved out in cleaning the soil. There are two points in connection with the pits which have always been puzzling. One is the depth and shape of the pits. One pit on the south side of trench I (not shown in section) reached a depth of 5 m. below the surface from which it was dug, and others were also of a considerable depth. The feature about the shape which is remarkable is that the sides of the pits are usually very markedly concave, to such an extent that their clearance is extremely difficult, and their original excavation would have been equally so. It would appear that it would have been much simpler to extend the pits sideways, rather than to dig them to such a depth, or in such very awkward shapes. The explanation of this feature is probably the very simple one that as the brick-makers dug their holes, the spoil was dumped round the edges, and it was therefore simpler to go down, or into the sides of the pit, rather than to shift the dumps. This proceeding would be reprehensible in modern archaeological practice, but may have seemed labour-saving to the Neolithic builders. An incidental side-light given by the number and depth of these pits is that the structures of the Neolithic pottery phase must have been very much more extensive than the surviving remains would suggest. It is, of course, possible that some of the material was used for manuring the fields, a well-established modern use of tell-material, but the association of the fill with an immediately-succeeding building phase makes it probable that this was the main purpose of the operation.

The second puzzling feature was the amount of pottery in the fill of the pits, which would suggest that there was already a great deal of Neolithic

pottery lying about when the pits were dug. The explanation of this is given by the evidence which is beginning to appear that there was a stage of occupation of the pottery phase which preceded the excavation of the pits. Only very slight traces of this survive, and most would have been destroyed when the pits were dug. The evidence therefore suggests that the two main stages of the Neolithic pottery phase was an earlier camping stage, followed by one in which there was large-scale building. This would suggest that the newcomers were not previously town-dwellers, and only started to build themselves permanent houses after living on the site for some appreciable time. It is to be hoped that further excavation will throw more light on this evolution.

In Trench I, the uppermost of the Neolithic pottery levels is immediately succeeded by levels belonging to the Early Bronze Age. The top of the Neolithic level consists of a grey sticky layer which in consistency resembles a buried turf-line such as one gets in British excavations, and is marked as "Turf?" in the section published in the 1953 report (P.E.Q. 1953, p. 8, Fig. 3). This has now been examined by Professor Zeuner. In his detailed report, which follows this article, he confirms the existence of a soil-level, and estimates a gap in occupation of 300 ± 100 years during which it was formed. This will prove extremely useful in working out the history of the tell. It remains to be seen whether this gap in occupation occurs all over the site, or whether, perhaps in the Chalcolithic period, there was at the time small-scale occupation round the spring.

The evidence from the tombs does certainly suggest that there was occupation in the neighbourhood, of which no evidence appears in Trench I. Two different cultures are in fact represented, that of Tomb A94 (P.E.Q. 1953, pp. 11–12 and Pl. XL. 1), of the culture usually called Late Chalcolithic, and A13 (P.E.Q. 1952, pp. 75–6, Fig. 4. 1–5, Pl. XX, 1), with pottery of the type called Early Bronze Age Ia. It will be shown elsewhere that these two cultures are probably contemporary, and represent two of the groups combining to make up the build-up of population in the phase preceding the full Early Bronze Age. A date is given to A94 by a Carbon-14 dating of 3260 B.C. $\pm$ 110 years (see Professor Zeuner's article, p. 64). On the north-east side of the tell, the phase is probably represented by Professor Garstang's level VII. A presumably earlier phase is the pottery ascribed by him to Level VIII, which again is not found in Trench I. Thus the gap in occupation may correspond to one of these phases, or may precede or succeed them; the excavation of the other areas now in progress should make its position clear. Its identification has already shown the value of soil analysis and geochronological methods on Near Eastern sites, and I am most grateful to Professor Zeuner for his collaboration in this matter.

The Early Bronze Age and the Intermediate Early Bronze—Middle Bronze Phase

The excavation of the successive Early Bronze Age city walls in Trench I was completed in 1953 (P.E.Q. 1953, pp. 8–10). In the new Trench II

at the north end and Trench III at the south end, their excavation has only just begun, and a comparison of the succession there must await further work. In Trench I, clearance was continued of the sloping strata which represent the decay or destruction of the successive walls. The complete slope associated with the latest wall, and therefore of the mound as it existed at the end of the Early Bronze Age, has now been laid bare, and is shown in the section, Fig. 4. This has the interesting result of showing that at this point, at least, the foot of the slope was defended by a ditch, very much in the same way as in Iron Age hill-forts in Britain. The ditch was found full of typical water-laid silt, horizontally bedded. The ditch was probably originally W-shaped, for beyond the complete ditch-profile is a further slope overlaid by the horizontally-bedded silt, which must have been held up by an outer lip, this being subsequently cut away in the construction of the Middle Bronze Age defences. The defences of the latest Early Bronze Age town therefore consisted of a multiple ditch, surmounted by a slope 11 m. long, 7·75 m. high, at an angle of approximately 25 deg., crowned by a mud-brick wall 2·25 m. wide, a sufficiently formidable defence. The excavation of the base of the slopes associated with the earlier walls is not yet complete, but, as the section shows, there are already indications that they also were associated with ditches. Trenches II and III will show whether such features were constant.

Above the silt filling of the latest ditch are buildings of the E.B.-M.B. phase. The fact that this accumulation of silt intervened between the latest Early Bronze Age phase and the first E.B.-M.B. buildings is useful evidence for elucidating the history of the latter period. Higher up the trench, the E.B.-M.B. houses are built directly over the top of the stump of the last Early Bronze Age wall, and are in part terraced into the levels contemporary with it. The violent destruction of this wall and the ensuing cessation of the Early Bronze Age culture can undoubtedly be attributed to the newcomers. Therefore, on the evidence of the upper end of the trench, it appeared that immediately after destroying the Early Bronze Age city, they built their own houses on top. It is now clear that there was a sufficient interval for silt to accumulate in the ditch to a depth of at least 2·25 m. (making allowance for the fact that the succeeding buildings are in part cut into the fill), an interval the length of which it is difficult to calculate exactly, but which is certainly an appreciable one. This fits in well with other evidence. All over the surrounding slopes to the west and north of the tell, in the cemetery areas, traces of occupation of this period are found, of which the evidence is abundant pottery but only the scantiest remains of structures. In the second place, by the time the succeeding houses on the tell were built, there was already a considerable amount of the pottery attributable to the newcomers lying about. Thirdly, it helps to explain the complete break with the building traditions of the Early Bronze Age. Finally, it is usually considered that this intermediate period between the Early Bronze Age and the full Middle Bronze Age lasts from c. 2100 B.C. to 1900 B.C. The structural remains found at

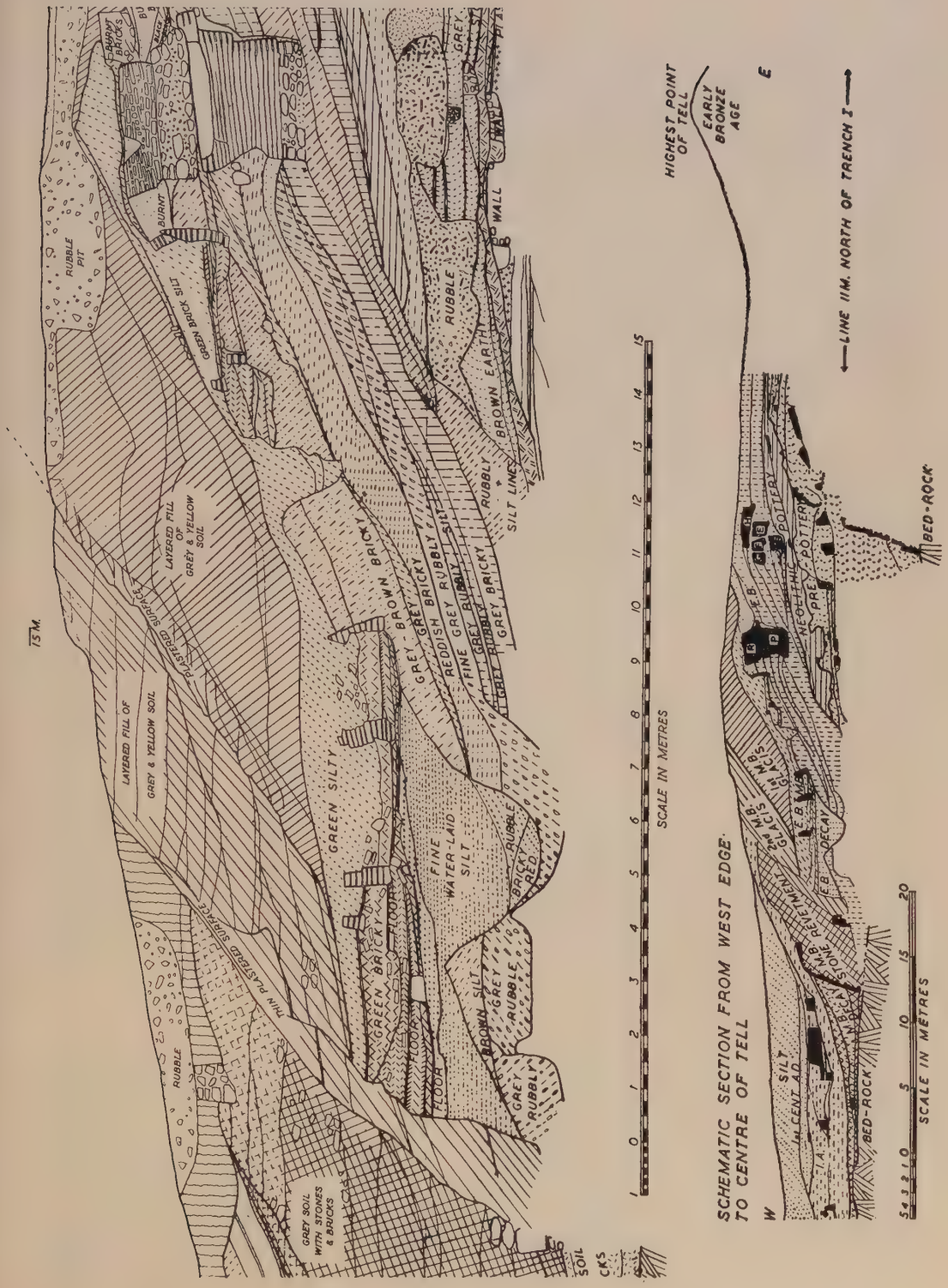


Fig. 4. Section of central portion of Trench I.

Jericho seemed insufficient to cover this period, and the evidence that there was an interval before the first buildings makes the chronology easier to understand. The newcomers, who can with a considerable degree of probability be identified as nomadic Amorites, in the first stages after their destruction of the Early Bronze Age city lived a camping life, partly on the ruins of the city, and partly on the surrounding slopes, and only later began themselves to build houses. The position thus parallels that of the Neolithic pottery stage, and no doubt reflects a very similar course of events.

Like the buildings excavated in 1952, those which overlie the silted-up ditch, and terrace up the hill to join the former, are of very slight build, with walls one brick thick only, and the bricks are soft and of a peculiar greenish clay. The walls seem to have decayed readily; three layers of superimposed buildings could be traced, each overlaid by a layer of greenish silt from decayed brick. In the uppermost, some of the walls on the lowest terrace were standing to a considerable height, buried in such a layer of greenish silt. The structure was an interesting one. The west wall had been destroyed by the Middle Bronze Age defences. A cross wall in the centre of the trench, running up to the back wall of the terrace, divided the area into two rooms (Pl. XIII, 1). In each of these was a solid block of mud-brick, in the core of one of which was found a complete cup of the form characteristic of the period. The most probable interpretation of these blocks is that they were altars. Some confirmation that the structure had ceremonial significance may be given by a foundation burial of an infant beneath the dividing wall. A setting for this foundation deposit was provided by a cist made of rough stones. On the edge of this, but not in it, lay a compact little bundle of bones, crushed together in such a way as to suggest that the body had been boiled to remove the flesh, and placed in position in a bag (Pl. XIII, 2). Such a foundation sacrifice could of course have been made as a preliminary to the construction of any building, and can therefore only be taken as suggestive of, but not a proof of, a ceremonial building. In one room was a large and well-built clay bin, suitable for offerings, as in the T. Duweir Fosse Temple (Lachish II, Pl. VII, 2), but again not conclusive, as it could have been intended for domestic use. Unfortunately, within the area excavated not enough of the plan could be cleared to afford positive evidence of the purpose of the building.

The Middle Bronze Age

In Trench I, the excavation of the defensive systems of the Middle Bronze Age was completed. It will be remembered that it had already been established that there were three successive stages in these defences. In the first two, there was a steep plaster-faced scarp, to which in Palestinian archaeological parlance the militarily-incorrect name of glacis is usually given, crowned by a wall, which survives only as footings in the north-west corner of the tell (P.E.Q. 1952, Fig. 3). In the third stage, a great stone revetment, built on a batter, formed the foot of the slope, crowned by a mud-brick

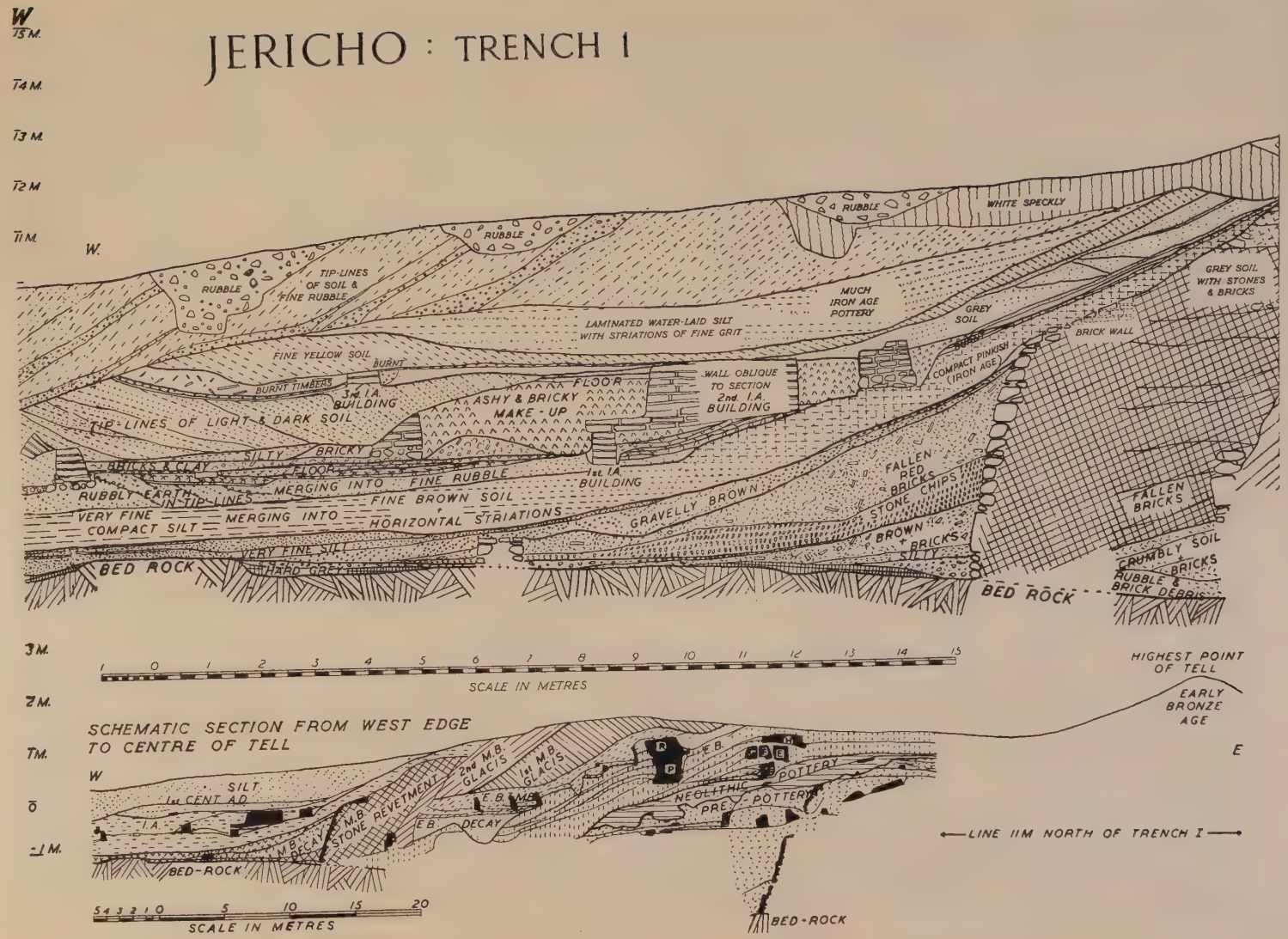


Fig. 5. Section of west end of Trench I.

parapet, and with a fill presumably sloping back on to the earlier scarps, though this has not been established owing to the denudation of the tell. The resultant form of the tell is indicated in the diagrammatic section on Fig. 3.

As revealed in Trench I, the base of the earliest plastered scarp merges into a gentler slope. This may have formed a berm inside a final revetment, but all evidence was destroyed by the later stages. The second plastered scarp, which was steeper than the first, was based on a substantial stone foundation. At least two repairs to the plaster surface can be traced.

The final phase was undoubtedly the most impressive. The great stone revetment of the fill which buried the face of the earlier scarps has been traced round the greater part of the tell, and formed the maximum extension of the defences. It has hitherto been called the Fosse, but the clearance of the western end of Trench I up to its face has shown that on this side at least there is no external ditch, and the term is therefore a misnomer. What probably did occur, either when it was built, or when the earlier scarps were constructed, was the truncation of the slopes derived from the debris of the earlier stages of occupation. The stone revetment rests on bedrock, and the almost-level rock in front of it was exposed for a distance of at least 18 m. (the limit of the excavation), for all the deposits here accumulated after it was built. It must therefore have formed a most impressive rampart round the foot of the city, backed by a steep scarp crowned by a wall at a height of 18 m. above the rock at its base (Pl. XIV).

In Trenches II and III, portions of the same series of defences have been identified. Their clearance is not yet sufficiently far advanced to throw additional light upon their history.

The lower layers which accumulated against the face of the stone revetment contained only Middle Bronze Age material. The first of these consisted of stone and bricks, obviously derived from the ruins of the town after its destruction, presumably by the Egyptians in the years following the expulsion of the Hyksos from Egypt in 1580 B.C. Above is an accumulation of fine rain wash, and, above that, occupation of the Iron Age. Three levels of building in this area belong to this period, mainly seventh century B.C., probably going down to the time of the Second Exile. Above them, silt levels are covered by a surface into which a grave was dug of the type characteristic of the first centuries B.C.–A.D. at Qumran. A large number of graves of similar type in Trench II suggests that the tell was used as a cemetery at this period. Above this level in Trench I was a further thick fill of material presumably washed down the tell. The amount of Early Iron II material in the levels both below and above the first century surface shows the extent of the deposits of this period which had originally existed on the tell.

As was described in the earlier reports, the occupation levels of the Middle Bronze Age have all been denuded in the region of Trench I; the diagrammatic sections indicate the great amount of erosion the tell has undergone in

this area. The only area in which Middle Bronze Age buildings have so far been traced is on the east side of the tell. Here, in Site H.II, the excavation was begun in 1952 and 1953 of an area adjoining that excavated by Professor Garstang, in which there was a large number of small rooms, many of them containing jars full of corn, and which were destroyed by fire at the end of the Middle Bronze Age.

In 1954, the area of excavation was extended to the east. In these two areas, H.II and H.III, were found a series of rooms similar to those found by Professor Garstang, some containing jars of corn, and similarly destroyed by fire. On the south side of the area excavated, they open on to a lane, which, where the slope is steep, has a series of shallow, stone-built steps, very similar to those in many streets in the Old City of Jerusalem. Where the slope is less steep, the surface is of beaten earth, below which runs a well-built drain (Pl. XV, 1). The extended area now found of these buildings, and the dividing lanes (for a similar one was found in the earlier excavations) make it seem probable that these buildings are private houses, each with its store-rooms on the ground floor, not store-rooms associated with a palace.

The Late Bronze Age

Above these Middle Bronze Age buildings was a thick fill consisting of streaks of burnt material, clearly washed down the mound from the burnt buildings higher up. This phase of erosion belongs to the period of abandonment of the site, which I suggested in my preliminary survey of the evidence (P.E.Q. 1951) lasted from c. 1560 to c. 1400 B.C. Above this wash were discovered in 1954 the first remains found by the present expedition which can be attributed to the Late Bronze Age, the period within which the attack by the Israelites under Joshua must fall. The remains were not spectacular. Immediately under the present surface of the tell were the foundations of a wall. Adjoining it was a contemporary floor, surviving over an area of not much more than a square metre (Pl. XV, 2). On this floor was a small oven, or *tabūn*, and beside it a juglet of fourteenth century B.C. date (Pl. XVI, 1). This is presumably therefore the period of the wall and floor, though unfortunately the date cannot be very closely fixed.

This find at least confirms the original existence of a Late Bronze Age settlement on this part of the site, and the partial erosion of the building shows how the rest of the settlement has disappeared.

This does not conclusively prove the date of the destruction of Jericho by the Israelites. It proves that there was a fourteenth century settlement which they might have attacked. But since so much of this settlement has disappeared, it would not be impossible that there was a still later one which has been completely eroded. So far, nothing has been found to suggest that there was such a settlement, and the evidence discussed in my article in 1951 points to a date somewhere about the middle of the fourteenth century for the end of any Late Bronze Age occupation. No new evidence on this subject has been added by the present expedition.

The Cemetery Area

A considerable additional area of the low slopes to the north of the tell, beneath the present refugee village, was examined for tombs. Ninety-four tombs in all were located. The great majority of these lay on a small spur immediately to the north of the most prolific area of 1953, and were of the same period and type as these had in origin been. That is to say, they were of the Intermediate Early Bronze-Middle Bronze Age, and of the type with deep shaft and large chamber, containing individual burials with disordered bones, with a few pottery vessels as offerings. Only a very few had been re-used in the Middle Bronze Age. The tombs were amazingly closely packed, this one area accounting for 58 of the total tombs found. Unfortunately, the area in which these tombs were was one of very unsound rock, and in many cases the roof had fallen. Though the area was clearly not a productive one, it was considered that for the sake of scientific accuracy all the tombs in it should be located, so as to give a complete picture; this occupied a large part of the season's work.

In Area F, the area which lies nearest to the tell, two further tombs of E.B.III were found, of the same type as those already excavated (P.E.Q. 1952, p. 74). The best finds were some lovely little bowls of Khirbet Kerak ware. In Area A, in addition to some E.B.–M.B. tombs, one productive one was found, with two periods of use, the earlier Late Chalcolithic, resembling A 94 (P.E.Q. 1953, Pls. 11-12) and the later E.B. III.

The most productive area, lying comparatively near the tell, and designated J, was located late in the season. This contained a number of good Middle Bronze Age Tombs. They were mainly of the type found in 1952, that is to say they had been used over a considerable period, with a consequent disturbance and piling-up of earlier burials. Thus, though they contained some fine objects, including vessels and furniture of wood, and other perishable objects, many of the objects, especially the large ones, had been broken in the piling-up process, and the finds therefore were not in such a good condition as those of the remarkable tombs found in 1953. A number of very beautiful small objects was found however. Of these, perhaps the most remarkable, a little wooden juglet of incredible delicacy of workmanship, is illustrated on Pl. XVI, 3.

One tomb was outstanding in character and contents. It was a single burial of Middle Bronze Age date, the only single burial of that period so far found. The burial was intact, except that the skull had been crushed by a piece of roof-fall (Pl. XVII, 1). The dead person was obviously a young warrior. Beside him lay a fine dagger with an alabaster pummel, and an axe, both typical of an early stage in the Middle Bronze Age. On the other side of the tomb lay two other daggers and two other axes. Beside him was a very fine bronze belt, much decayed, but the embossed design was clearly visible (Pl. XVII, 2, 3). A similar belt, but not embossed, was found at T. el Far'ah, near Nablus (*Revue Biblique* LIV, Pl. XX). In the shaft of the tomb were the fore-parts of three equids; whether they were horses or asses must

await examination when the bones reach this country, as they were very fragmentary. The pottery offerings in the tomb were of exceptional fineness. The most remarkable was a beaker in the form of a goat's head (Pl. XVII, 4).

The excavation of these tombs, with their wooden objects and materials such as basketry still in the state of preservation which is such a remarkable feature of the Jericho tombs, provided the opportunity for an examination by Professor Zeuner of the reasons responsible for this abnormality. A full report will in due course be published by Professor Zeuner, but an outline of his conclusion can be given here. In the first place, he established the fact that there was a concentration of carbon dioxide in the tombs seven times greater than that in the outer air. Such a concentration would have acted as an anti-biotic, in other words, would have killed the organisms of decay before they had destroyed the perishable articles. In the second, there were also bituminous gases emanating from the rocks, which would have had the same result. Professor Zeuner accounts for the presence of these gases by the situation of Jericho in the zone of crushing, perhaps a hundred metres wide, at the edge of the great Jordan rift. The distorted rock strata visible in the walls of the tombs bear clear witness to this. The cracked and pulverised rock would allow the penetration upwards of subterranean gases, which would accumulate in the hollows of the tomb chambers.

Thus the chance of the geographical position of the city of Jericho and its cemeteries has enabled evidence to survive of much that has vanished on other ancient sites. The history of the city itself can be established in excavations on the tell, and from it many important deductions can be made as to the history of Palestine. The finds from the tombs help, paradoxically enough, to bring the story to life, with the intimate details they provide of the possessions of the inhabitants.

THE NEOLITHIC-BRONZE AGE GAP ON THE TELL OF JERICHO

By F. E. Zeuner

During her work in the large cross-section of the Tell, Dr. Kenyon began to suspect the presence of a chronological gap between the pottery-containing Neolithic level and the Early Bronze Age I. On my visit to Jericho in the spring of 1954, therefore, I studied the section with care and collected a series of samples which were subsequently investigated in the Geochronological Laboratory at the Institute of Archaeology, with the results set out in this paper.

On occupation sites, such as tells, periods of abandonment may manifest themselves in three different ways, namely (*a*) vegetation may establish itself and under its influence chemical weathering modify the constitution of the last archaeological deposit, or (*b*) disintegration of buildings may result in so rapid a deposition of talus in the depressions that vegetation cannot gain a foothold and therefore chemical weathering cannot take place, or (*c*) denudation removes the surface levels at a rate which is faster than that of soil formation. Clearly, case (*c*) merely produces a gap in the stratification, indicated perhaps by an unconformity, or, if long enough, a break in the sequence of pottery types. Case (*b*) produces an increase in the thickness of the talus which may, in the floor of a depression, be connected with silting under the influence of rain water. But this process is practically indistinguishable from the general process of tell formation, so that exceptionally fortunate circumstances are required to recognise a gap.

There remains alternative (*a*), by far the most reliable of the three since vegetation is sensitive to trampling, and incipient soil horizons are mixed up by disturbance. Of course, all three processes happen simultaneously in adjacent areas, but if a buried soil level can be identified, it proves non-occupation at least for that part of the tell.

The top of the pottery-Neolithic was shown to me by Dr. Kenyon, and after a careful examination of the section a spot was selected for detailed study situated beneath the Early Bronze walls on the left-hand edge of Section Fig. 2. It had the advantage that on the surface, at the edge of the Trench, there were faint traces of a soil formed under present-day conditions.

It must be realised that mature soils require periods of many centuries for their formation. Unfortunately, the term "soil" is often used loosely for any unconsolidated sediment, whilst it should be restricted to the product of alteration of any deposit or other rock under the influence of the atmosphere ; heat, frost, rain, vegetation. Apart from physical disintegration, chemical changes take place which are the more obvious the more humid the climate

is. Thus, the loamy "brown earth" soils on the Chalk of Southern England are easily recognised as products of chemical alteration, the most conspicuous process being the washing out of carbonate of lime of which the Chalk is mainly made up.

The chemical changes are chiefly caused by the dead vegetable matter which decays on and in the top layers of the soil. With rain-water, humus solutions are thus formed which have an acid reaction and dissolve alkaline substances, especially lime. The top horizon of a soil, therefore, has normally more humus than the lower ones, and lime is washed out. It is called the A horizon.

Lower down in the B horizon, some of the washed-out material may be deposited. The unweathered material underneath is called the C horizon.

From what has been said it is evident that in the arid climate of Jericho the washing-out process is slow and re-deposition of dissolved material takes place almost on the spot. Especially the lime (present in abundance because much of the Tell material is ultimately derived from the limestone of the neighbourhood) and gypsum (ultimately derived from the Lisan Marls by way of plaster and mudbricks) stay where they are, and the horizons of a soil in its first stage of formation cannot thus be recognised by their means.

That this is so is clear enough to anybody studying the Tell. Neither humus horizons nor illuvial horizons are visible to the eye. It was, therefore, necessary to use other substances to establish the presence of weathering. Under these conditions, the study of a supposed buried weathering horizon would not be conclusive unless the soil forming at the present day was available for comparison. For this reason, samples were taken from the edge of the trench at the spot already mentioned from the surface to a depth of 50 cm. which was as far down as one could reach. The three samples thus taken, coming from vertically above the supposed buried soil of post-Neolithic age, could be directly compared with the latter, since they excluded as much as possible variations in the soil type due to variation in local conditions.

The modern soil proved to be a very immature *Xerorendzina*. It contained both carbonate of lime and gypsum right up to the surface. The vegetation was very sparse, but prior to the application of the excavators' footwear, there must have been more, though the herbs and dwarf shrubs will always have left bare patches of soil surface showing.

The material of the soil horizons did not differ from that of the Tell strata ; it consisted of a dusty earth, grey or light brown, with angular fragments of limestone, brick, or pottery. Shades of colour are not clearly visible in the dazzling light of Jericho, except before sunrise or in the late evening. Even then, they are too slight to be interpreted. In the laboratory they have been determined with the aid of the Munsell Colour Chart as shown in the Table, p. 68.

The chemical tests were carried out on samples from the surface, from −25 cm., and from −50 cm. The most useful test was that for organic matter, the content of which is about 2·5 per cent. in normal deposits of the Trench

I area. The method used to determine it was oxidation with hydrogen peroxide, which leaves charcoal (an awkward contamination in soil tests) untouched. The result of this test will henceforth be called TOM, for total organic matter. It was found that the top level contained 3·52 per cent., whilst at −25 cm. there was only 1·44 per cent. At −50 cm. the amount was the normal one, 2·52 per cent. It was reasonable to suspect that the concentration near the surface was due to the formation of an A-horizon, supplied with organic matter by vegetation, over and above that present initially and derived from the occupation debris. On the other hand, at −25 cm., much TOM appears to have been destroyed.

That these differences are not accidental is indicated by another test, that for alkali-soluble organic matter (henceforth called ASOM). This component of the total organic matter is liable to be washed down in soils containing lime, an alkaline substance. The results of the test (see table) must of course be viewed in the light of the TOM present, hence it is most convenient to form an index showing how much ASOM is present in relation to TOM. The index $\frac{\text{ASOM}}{\text{TOM}} \times 1000$ is:

at the surface	2·13
at −25 cm.	5·08
at −50 cm.	2·27

The high value at −25 cm. suggests that washing-down is indeed taking place. The slight concentration of phosphates at the same level (see table) may be due to the same cause.

Incipient soil formation in the Tell deposits can thus be recognised by the combination of a concentration of TOM in the A-horizon, the washing-down of ASOM into a lower horizon, and the washing-down and concentration of phosphate in the same level. This is, therefore, an incipient B-horizon.

Equipped with this information, it becomes possible to interpret the buried surface of the pottery-Neolithic level. The following samples were taken:

(1) one from the overlying Early Bronze Age talus, about 20 cm. above the buried surface,

(2) one from a layer, 5–8 cm. thick, at the buried surface, showing here and there faint horizontal streaking—evidence of rain-wash,

(3) one from the slightly darker and slightly coarser underlying horizon which is again about 5–8 cm. thick,

(4) one from the next lower horizon which is about 10 cm. thick and slightly more stony, and

(5) one from the underlying ordinary Tell talus, about 40–50 cm. below the supposed buried land surface.

The application of the described tests brought clear proof of the presence of a buried soil. Samples (1) and (5) had about the normal amount of TOM

(2·34 per cent. and 2·31 per cent. respectively). There was a concentration in (2), 3·54 per cent., which figure is almost identical with that for the A-horizon of the modern soil. There was a deficiency of TOM in (4), i.e. at about 25 cm. from the surface, as in the modern soil.

The washing-out of ASOM from the A-horizon and its relative concentration lower down was very conspicuous, more so than in the modern soil. $\frac{\text{ASOM}}{\text{TOM}} \times 1000$ amounted to :

above the buried soil	2·44
just below its surface	1·72
at −25 cm.	3·15
at −50 cm.	3·03

The greater intensity of eluviation in the A-horizon is thus compensated for by a deeper extension of the B-horizon.

Similarly, the eluviation of phosphates is more evident than in the modern soil. The normal amount in Tell material of this area appears to fluctuate around 500 mgms. per 100 gms. (± 10 per cent.). In sample (2), of the A-horizon, it proved to be no more than 156, whilst there was a concentration (580) in sample (3), the upper part of the B-horizon.

This evidence established the presence of a soil, and thus of a period of local non-occupation, between the pottery-Neolithic and the Early Bronze Age. The question now arises of how long this period lasted.

There is no doubt that the fossil soil shows more eluviation than the modern one. Assuming the rainfall to have been the same then as to-day, the fossil soil would have required a longer period of formation than the modern one. Unfortunately, this line of enquiry does not take us far, since it is impossible to say when the modern soil began to form. The top level surviving at the locality is the filling of a rubble pit the age of which is uncertain. But this soil must be at least as old as the German excavation of 1910, for that party had its tents here. The fossil soil being much better developed than the modern one, its formation must have required a longer time. The most moderate estimate is a century.

On the other hand, the last general occupation of the Tell is Byzantine, and the soil is younger than that, say younger than 1700 years. Judging from the rate of weathering observed elsewhere and making allowance for the aridity of the climate, this figure would appear much too great. An estimate of 300 ± 100 years for the period the fossil soil represents appears to be the best in accord with the observations.

Finally, there is the question when this period of non-occupation occurred. Evidently, the archaeological gap corresponds to the Chalcolithic. The area was not devoid of population during that phase, for there are rock-cut tombs of Late Chalcolithic age to the north of the Tell. Wood from one of these (A94) has recently been dated from its radiocarbon content in the laboratory established in the Royal Institution. The result was 3260 B.C. (with a standard deviation of ± 110).

SAMPLE	COLOUR (Munsell)	TOM%	ASOM%	$\frac{\text{ASOM}}{\text{TOM}} \times 1000$	PHOSPHATE mg./100 gm.
		Modern Soil			
Sample series 21					
surface	10YR 6/3 pale brown	3·52	·0075	2·13	256
−25 cm.	10YR 6/2 light brownish grey	1·44	·0073	5·08	300
−50 cm.	10YR 6/3 pale brown	2·52	·0057	2·27	256
		Pre-Bronze Age Soil			
Sample series 20					
(1) above soil, +20 cm.	10YR 6/3 pale brown	2·34	·0057	2·44	530
(2) − 5 cm.	10YR 6/3 pale brown	3·54	·0061	1·72	156
(3) −12 cm.	10YR 5/2 greyish brown	2·72	·0080	2·94	580
(4) −20 cm.	10YR 8/3 pale brown	1·94	·0061	3·15	450
(5) −45 cm.	10YR 6/2 light brownish grey	2·31	·0070	3·03	480

A NEWLY-DISCOVERED FRAGMENT OF A COMMENTARY ON PSALM XXXVII FROM QUMRÂN

By J. M. Allegro

The fragments now published are part of the very rich hoard of MS. material from the Fourth Cave at Qumrân (4Q)[1], and comprise two pieces of leather approximately 20 cms. by 10 cms. and 9 cms. by 5 cms. respectively. The material has suffered from damp particularly badly where the join between the two pieces might have been expected, so that there is now a gap of varying width in the centres of lines 7–12 of Col. II. The leather is now of a dark tan colour, and the writing only easily read with the aid of infra-red photographs, especially in Col. I. The columns are approximately 11 cms. wide with a margin between them of 1½ cms. The ruling is light and at fairly regular intervals of ·7 cm.

The regularity of the script lends itself easily to the computation of numbers of spaces and letters in broken lines, and is of particular note from the point of view of palaeographical dating. The most striking feature of the script is the tailed *shīn*, a convention borrowed from the contemporary cursive script. It is especially interesting that our text actually contains its cursive equivalent in פשר of l. 4a in Col. II, formed thus :

The inverted-V *aleph* is of an advanced type, the *beth* has its bottom horizontal stroke cutting the vertical at right-angles, and crossing a little beyond it to the right. The *kaph*, however, still finishes below the line, whilst medial *mem's* lower stroke has been brought up into line with the other letters, and the whole

[1] The abbreviations used in this article are as follows: Q=Qumrân, preceded by the number of the cave concerned; p=*pesher*; S=The Manual of Discipline; CDC=The Damascus Document (Schechter's edition); M=The War between the Children of Light and the Children of Darkness. For the use of these standard abbreviations, see R. De Vaux, *Revue Biblique* 60 (1953) pp. 87 f. For the great privilege of being allowed to share in the work of editing these fragments, I am indebted to Mr. G L. Harding, Director of the Department of Antiquities, the Hashemite Kingdom of Jordan, and Père De Vaux, our editor-in-chief.

is made with one stroke. Final *mem* is also well advanced, usually no larger than the surrounding letters, almost square in shape but with the characteristic "bump" well to the right of the closing stroke which is still somewhat inclined from right to left. The horizontal stroke of the *resh* is very wide, the *taw* has almost reached its square appearance, but although *zayin* is curved, thickening at the top is hardly yet noticeable. *Samekh* is fully closed, *qoph* and *'ayin* have large heads, and the tail of the latter is fairly long although the letter is not yet completely on its side. *Yodh* and *waw* are differentiated still, but more by the large, blocked-in head of the former than by their respective lengths. In the cursive *yodh* of יקר and בורים in the interpolated line 4a of Col. II, the open, triangular heads are particularly interesting.

A full discussion of the palaeography of this and the other fragments must be reserved for the final publication, but a preliminary comparison of our script with that of the funerary inscriptions of the first centuries B.C. and A.D., as well as with other Qumrân material, seems to indicate a date about the turn of the era. The strong influence of cursive forms on our scribe's hand, resulting in some mixture of old and new forms, makes a more precise dating of this hand particularly hazardous until the mass of palaeographic material from Qumrân has been systematically studied.

TEXT [1]

Ps. xxxvii

Col. I

1	יובדו בחרב וברעב ובדבר הרף מאף ועזוב חמה ואל	8
2	תחר אך להרע כיא מרעים יכרתו פשרו על כול השבים	9a
3	לתורה אשר לוא ימאנו לשוב מרעתם כיא כול הממרים	
4	לשוב מעונם יכרתו וקואי יהוה המה ירשו ארץ פשרו	9b
5	המה עדת בחירו עושי רצונו ועוד מעט ואין רשע	10a
6	ואתבוננה על מקומו ואיננו פשרו על כול הרשעה לסוף	10b
7	ארבעים השנה אשר יתמו ולוא ימצא בארץ כול איש	
8	]שע וענוים ירשו ארץ והתענגו על רוב שלום פשרו על	11
9	]אביונים אשר יקבלו את מועד התענית ונצלו מכול פחי	
10	]ולו[ ]י הארץ[ ]כול תענ[ת	

Col. II

1	שבי המדבר אשר יחיו אלף דור בישׂ[	
2	אדם ולזרעם עד עולם ובימי רעב ישׂ[בעו כיא רשעים	19b
3	יובדו פשרו [אשר] יחים ברעב במועד [	20a
4	יובדו ברעב ובדבר כול אשר לוא יצא[	
4a	ואוהבי יהוה כיקר כורים פשר[	20b–c
5	עדת בחירו אשר יהיו רשים ושרים[	
6	צון בתוך עדריהם	
7	כלו כעשן כולו פשר[ ]על שרי הר[שע]ה אשר הונו את עם	20c
8	קודשו אשר יובדו כעשן האור ברז]וח לוה רשע ולוא ישלם	21a
9	וצדיק חונן ונותן כיא מבור[כו ירז]שו ארץ ומקללו יכרז]תו	21b–22b
10	פשרו על עדת האביונים ה[ ]ם נחלת כול ה[ ]ל[	
11	ירשו את הר מרום ישר[אל ועם ?] קודשו יתעננו[	
12	יכרתו המה עריצי ה[עם ר]שעי ישראל אשר יכרתו ונשמ[ד]ו	
13	לעולם	
14	מיהוה מצעדי גבר כוננו [ו]כ[ו]ל [ד]רכו יחפץ כיא י[פל לוא	23b–24a
15	יוטל כיא יהוה סומך ידו] פשרו על הכוהן מורה הצדק אשר	
16	]הכינו לבנות לו עדת [בחירו ?	
17	נער הי]יתי וגם זקנתי ולוא[ראיתי צדיק	25a–b
18	נעזב וזרעו מבקש לחם כול היום]חונן ומלוה וזר[עו לברכה	26a–b
19	]אל ב[	

[1] A dot over the letter indicates that the reading is probable though not certain, whilst a small circle indicates only possibility.

TRANSLATION

Col. I

". . . will perish by the sword, and by hunger, and by plague. **Cease from anger and forsake wrath, and be not** [2]**inflamed with a fury which leads only to evil, for the wicked will be cut off.** Its interpretation concerns all those who turn back [3]to the Law, who do not refuse to return from their wickedness, for all those who rebel against [4]turning back from their iniquity will be cut off. **And those who are waiting for Yahweh will inherit the earth.** Its interpretation: [5]they are the Congregation of His Elect who do His will. **And in a little while the wicked will be no more,** [6]**and I shall look carefully for his place and it will be gone.** Its interpretation concerns all the wickedness at the end of [7]the completion of forty years when there will not be found in the earth any *wicked* [8]man. **And the humble shall inherit the earth and they shall delight in the abundance of peace.** Its interpretation concerns [9]*the Congregation of* the Poor who accept the Season of Affliction, and they will be delivered from all the snares . . .

Col. II

. . . the Penitents of the Desert who will live a thousand generations . . . [2]Man and to his seed for ever. **And in the days of famine they will be satisfied but the wicked** [3]**will perish.** Its interpretation is that He will keep them alive in famine in the Season of *Affliction* . . .[4] will perish in famine and in plague all who did (? do) not go out . . . [5]the Congregation of His Elect.. [4a]**And those who love Yahweh are like the preciousness of lambs** (?). *Its* interpretation is that the Congregation of His Elect will be the Chieftains and Princes . . . [6]sheep in the midst of their pastures. [7]**All of them will be consumed like smoke.** The interpretation concerns the Princes of *Wickedness* who have oppressed His holy [8]people, who will perish like the smoke of *a flame in the wind.* **The wicked man borrows and does not repay,** [9]**but the righteous person is gracious and giving. For those whom He has blessed will inherit the earth, and those whom He has cursed will be cut off.** [10]Its interpretation concerns the Congregation of the Poor . . . the inheritance of all the . . . [11]will inherit the Mount of the Height of Isr*ael*, and His holy *people* will delight . . . [12]**will be cut off.** They are the ruthless ones of the *people*, the *wicke*d of Israel who will be cut off and will be destroyed [13]for ever.

[14]**By Yahweh are Man's steps secured** *and in all* **his ways does He delight** ; **for though** *he fall he will not* [15]*be hurled headlong, for Yahweh is supporting his hand.* Its interpretation concerns the priest, the Teacher of *Righteousness who* . . . [16]has established him to build for Him the Congregation of *His Elect* . . . [17]*A lad* **was I and now am I old and yet** *I have not seen a righteous man forsaken nor his seed seeking food. All the day* **he is gracious and lends and his** *seed is a blessing* . . ."

NOTES

Col. I

[1] ואל MT אל־.

[2] תחר MT תתחר, cp. Pr. xxiv, 19.

[3] יברתו MT יברתון.

[4] קואי MT קוֵי.
יהוה written in palaeo-Hebrew script.

[5] בחירו, cp. בחירי אל, 1 QpHab X, 13. They are the equivalent of the Sons of Zadok, CDC p. 4, ll. 3–4.

[6] ואתבוננה MT וְהִתְבּוֹנַנְתָּ, cp. v. 36 of this psalm.

[7] ארבעים השנה, cp. CDC B p. 20, l. 15, and 1 QS IV, 18–19 for the קץ להיות עולה.

[8] שע[; there is room for one letter, presumably *resh*. For the thought, cp. 1 QS IV, 23.

[9] אביונים[; there is room for a word of three letters before אביונים, probably עדת, cp. Col. II, l. 10.

מועד התענית ; cp. מועדי צרותם, 1 QS III, 23, and מועד משפט, 1 QS IV, 20, מועד פקודה, IV, 18–19 and possibly IV, 26 (Brownlee, *BASOR*, S.S. 10–12, p.18, n.54). The reading תענית is partly confirmed by the remains of the same word in l. 10. It is doubtful whether תענית has the later technical significance of a 'time of fasting', since the following ונצלו מכול פחי implies real affliction from outside.

Col. II

[1] שבי המדבר ; 'the Penitents of the Desert,' i.e., those who repent of their sins (שבי פשע, 1 QS X, 20; CDC p. 2, l. 5; p. 20, l. 17), the Penitents of Israel (שבי ישראל, CDC p. 4, l. 2) who have turned away from the people (CDC p. 8, l. 16) and their sins (CDC B p. 19, ll. 20–21), who earlier went forth from the land of Judah (CDC p. 4, ll. 2–3) and sojourned in the land of Damascus (CDC p. 6, l. 5). המדבר may here mean the Qumrân area, but perhaps more probably the Syrian desert, cp. 1 QS VIII, 13 ; IX, 19–20.

אלף דור ; cp. CDC p. 7, l. 6 with variants אלף דור, אלפי דורות in Text B, p. 19, ll. 1, 2 and p. 20, l. 22 ; here the phrase is a *pesher* on ימי תמימים in v. 18a.

ביש[; there is room for 14 letters and spaces.

[2] רעב ; MT : רעבון.

[3] יובדו ; MT : יאבדו.

[אשר] פשרו ; אשר is certain before the following verb, as is the normal custom elsewhere, cp. 1 QpHab v, 3, 7 ; VII, 7, 15. Twice in 1 QpHab פשרו אשר precedes המה and a participle (VI, 3, 6). Normally before a noun פשרו על is used or פשר הדבד על as in 1 QpHab X, 9 ; XII, 2, 12. In Col. I, ll. 4–5, above, we have a variant פשרו without על for which there does not appear to be room before המה at the beginning of the line.

במוער[; the following word was probably תענית, cp. Col. I, l. 9. This would then leave room for 5 or 6 letters and spaces.

[4] יובדו . . . בדבר ; cp. 1 QS IV. 12.

יצא[; there is room after יצא for about 13 letters and spaces. If the tense is to be understood as past, there may be here a

historical reference such as the exodus to Damascus. Note especially CDC p. 6, ll. 5, 6; שבי ישראל היוצאים מארץ יהודה ויגורו בארץ דמשק אשר קרא אל כולם שרים, particularly in view of יהיו רשים ושרים in the following line of our text.

[4a] ואוהבי יהוה כיקר כורים ; MT ואֹהֲבֵי יהוה כיקר פָּרִים. The addition of this half-line in the text is clearly desirable, the *pesher* יהיו רשים ושרים explaining יקר of the text and, furthermore, the addition of the words inserted would be just sufficient to fill out l. 6 to the margin, there being no reason for כלו בעשן כולו of l. 7 to begin a new paragraph. The difficulties are, however, two-fold : (*a*) the new version with אוהבי for MT איבי, although preferable as far as the remainder of the half-line goes, gives strange sense with כלו בעשן of the next stichos ; (*b*) כורים, unless a dialectal variant of כָּרִים, has no meaning in this context. That כרים, ' lambs ' is intended seems to be indicated by the

צון בתוך עדריהם

of l. 6.

יהוה, written in normal Aramaic script.

[5] עדת בחירו ; cp. בחירי אל of 1 QpHab X, 13; בחירו of 1 QpHab IX, 12; בחירי רצון of 1 QS VIII, 6; בחירי העת of 1 QS IX, 14; בחירי אדם of 1 QS XI, 16; and especially ובני צדוק הם בחירי ישראל of CDC p. 4, ll. 3–4 (commenting on Ez. xliv, 15).

רשים ושרים ; see note on l. 4 above. There is room for 13–14 letters and spaces after שרים.

[7] כולו MT כלו ; for כלו in this collective sense, see Brown, Driver, Briggs, *Heb. Lex.*, p. 482a (top).

בעשן MT בעשן ; our version agrees with some MSS., LXX, Jer. and Syr.

שרי הנר[ה ; the size of the gap is not certain, but the remains of the tail of '*ayin* can be seen preceding the second *hē*. Cp. אנשי רעה of Pr. xxiv, 1.

[7-8] עם קודשו ; cp. עם קודשכה of 1 QM XII, 11.

[8] בעשן ; cp. ll. 4–5 of the fragment published in *Revue Biblique* 56 (1949) pp. 605 f.: וגלה הרשע מפני הצדק כגלו ת חש ך מפני אור ובחום עשן ואוננו עוד. האונר בר[וח ; the infra-red photograph clearly shows the *ḥeth* after the break and the remains of a *wāw* or *yodh* before it. Before the break are the remains of an upright stroke, possibly of a *resh*. For אור in the sense of ' flame,' cp. Ez. v, 2 ; Isa. xliv, 16 ; xlvii, 14 ; l, 11, and especially Isa. xxxi, 9.

[9] מקלל ; the *wāw* has been inserted above the letters between *qōf* and *lamedh* probably by the same hand as that which wrote l. 4a.

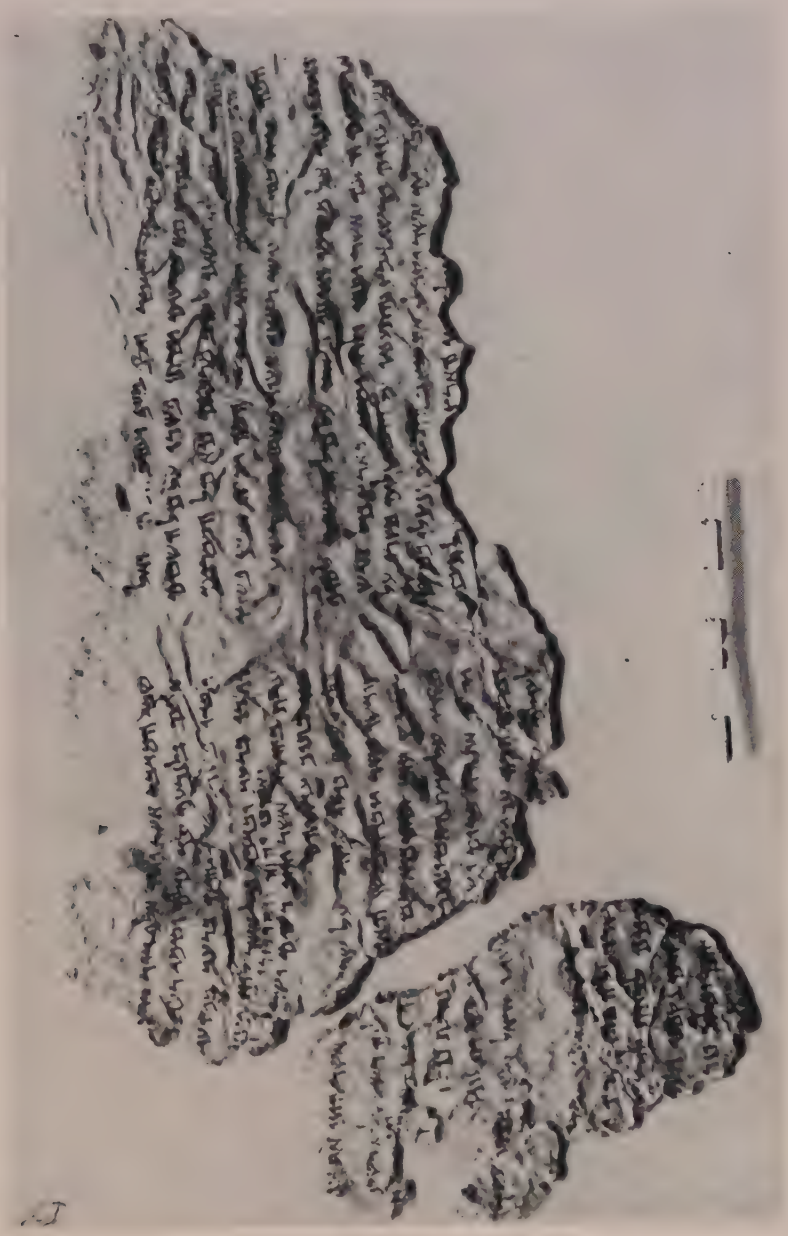
[10] אביונים[; there is a trace of a *mem* as the final letter of the missing word, which probably consisted of 5 letters. The extreme top right-hand corner of the first letter is visible and may possibly be the remnant of a *hē*.

[11] הר מרום ישר[אל ועם] קודשו ; הר קודשו would also fit very well, and would, in fact, better suit the space left to it according to our tentative positioning of the second fragment, but the following verb is then left without a conjunction. For the phrase ' the Mount of the Height of Israel,' see Ez. xvii, 23 ; xx, 40 and xxxiv, 14.

יתעננו ; cp. v. 11 of this psalm.

[12] ר]שעי עריצי ה]עם ר]שעי ישראל ; is suggested by v. 35 of this psalm. There is room for two letters after ה]עריצי, and עם seems at least possible. For עריצים in the *hodayōt*, see especially ll. 2 ff. of the hymn on pl. XII of *Megillot Genuzot* I, and Sukenik's note on p. 29.

[14] ר]כו ; On the right-hand edge of the hole in the leather can be seen the top of a *lamedh*, and before this the lower horizontal of a *kaph* ligatured on the left. If וכול is to be read here, this would account for the fact that there is room between ר]כו and the right-hand margin for 3 or 4 more letters than are represented in MT of v. 23. Furthermore כוננו can then be brought into the first half of the line where it belongs by sense,



Pl. XVIII.

מצעדי־גבר being given one rhythmic beat. The verse then reads :

מיהוה מצעדי־גבר
כוננו וכול דרכיו יחפץ.

The loss probably occurred through haplography at a time when, and in a place where, the plene writing of כול was still in use.

15 מורה הו[; there is room after for צדק and another word of three letters, probably אשר. For the priestly Teacher, cp. 1 QpHab II, 7–8.

16 הכינו[; there is room for about 21 spaces and letters before.

]עדתו ; there is room for 9 spaces and letters after this, בחירו probably accounting for 5 ; cp. Col. I, l. 5. The Teacher of Righteousness is not elsewhere spoken of as 'building the Community', but leading the 'root of His planting' (CDC p. 1, l. 7), the Hasidim, 'in the way of His heart' (CDC p. 1, l. 11). According to CDC p. 1, ll. 9–11, the Teacher did not make his appearance until twenty years after the root had 'sprung forth,' and the leading of the flock to Damascus was the work of the Star, 'he who studied the Law' (CDC p. 7, ll. 18–20).

17 תי[; before this there is room for about 22 spaces and letters of which]נער היי accounts for 7.

]ולוא ראיתי צדיק; just fits the space left up to the margin.

18 וזרו[; after the following]עו לברכה there is room for a two- or three-letter word. Whilst conceivably סור of the next verse could have stood here, the remainder of the verse would only have filled 24 of the available 29 spaces, and the word just visible in the middle of l. 19 begins probably with *'aleph* but, in any case, certainly not *'ayin* of the על of the introductory formula of the *pesher*. We may therefore deduce that there was a short gap at the end of l. 18 after לברכה and that the next line began with the *pesher*.

A PROVISIONAL CHRONOLOGICAL TABLE OF THE PREHISTORIC AND HISTORIC AGES OF PALESTINE

By Alan Rowe

By way of preface I wish to remark that in the following table, designed for the use of the general reader, so far as the Stone and Chalcolithic Ages are concerned, the *names* of the respective " Type Stations " (not of course always in Palestine) with which the artifacts are usually associated, or where they were first found, are added and prefixed by " T.S." The periods from Early Bronze I onwards named in the table[1] are those of the various tell-levels at Beth-Shan, " The House of the Serpent." [2]

CHRONOLOGICAL TABLE

Eolithic(?)	Supposed eoliths found at Bethlehem.[3]
Lower Palaeolithic :—	
1. *Abbevillian* (T.S., Abbeville, north France)	Crude hand-axes (coups-de-poing), the so-called bifacial or core implements.
2. *Chellean* (T.S., Chelles-sur-Marne, east of Paris)	Crude hand-axes rather more developed than the Abbevillian ones.
3. *Clactonian* (T.S., Clacton-on-Sea, England)	Earliest flake industry.
4. *Tayacian* (T.S., Tayac, near Les Eyzies, south-west France)	Implements of small and irregular flakes. The oldest flint industry in Palestinian caves. Tayacian man in Palestine certainly had knowledge of fire-making for hearths of greyish ash were found on bedrock of et-Tabūn cave, Wady el-Mughara, Carmel.
5. *Lower Acheulean* (T.S., St. Acheul near Amiens, north France)	Hand-axes, pear-shaped in profile and sometimes S-shaped in section.
6. *Middle Acheulean*	Hand-axes and flakes. First examples of bones (animal) manifestly broken by man—in Umm Qatafa cave, Judaean desert.
7. *Upper Acheulean*	Hand-axes and flakes. In the Umm Qatafa cave were traces of the birth of the bone industry in Palestine, actually manufactured points or " needles."

8. *Final Acheulean, or Micoquian* (T.S., La Micoque, near Les Ezysies, south-west France)	Hand-axes and flakes. More examples of animal bones broken by man and of some bone "needles". Traces of hearths at et-Tabūn cave, among the ashes being two burnt flint knives. Oldest human remains in Palestine from Level E of above-mentioned cave (molar tooth) and from Level Eb (heavily mineralised part of right femur); level E is lower than level Eb. The man to whom the femur belonged was a member of the so-called "Mount Carmel" people.	
MIDDLE PALAEOLITHIC OR LEVALLOISO-MOUSTERIAN (T.S., Levallois-Perret, Paris; Le Moustier, near Peyzac, south-west France) :—		
1. *Lower Levalloiso-Mousterian*	Burial of man at et-Tabūn cave; also the "Galilee Skull" found by Turville-Petre in el-Zuttiyeh cave north of Sea of Galilee. The remains belonged to "Mount Carmel" people.[4]	
2. *Upper Levalloiso-Mousterian*	—	—
UPPER PALAEOLITHIC (AURIGNACIAN, ETC.). (T.S., cave at Aurignac, south-west of Toulouse, south France) :—		
1. *Lower Aurignacian*	—	—
2. *Sub-Middle Aurignacian*(?)	—	—
3. *Middle Aurignacian* (covers Middle and upper Aurignacian and Solutrean of Europe). (T.S., Solutré, near Macon, south-east France)	—	—
4. *Atlitian* (*Magdalenian*). (T.S., Athlit, near Mount Carmel, Palestine; La Madeleine rock-shelter near Tursac, south-west France)	—	—
MESOLITHIC (*Age of microlithic flints*) :—		
1. *Early Mesolithic*	—	—
2. *Kebaran:* special industry at el-Kebarah cave, Palestine	—	—
3. *Lower Natufian* = Natufian I of R. Neuville. (T.S., Wady en-Natuf, Palestine)	—	—
4. *Upper Natufian* = Natufian II, III, IV of R. Neuville.		

NEOLITHIC OR TAHUNIAN (T.S., Wady Tahuneh, Palestine) :—	
1. *Early Neolithic* = Neolithic Era I of Jericho	Tell-levels XVII-X of Jericho.[5]
2. *Middle Neolithic* = Neolithic Era II of Jericho	Tell-level IX of Jericho. Earliest known pottery in Palestine.
TRANSITIONAL FROM NEOLITHIC OF JERICHO LEVEL IX TO CHALCOLITHIC	— —
CHALCOLITHIC ("*Copper-Stone*") .—[6]	
1. *Sub-Chalcolithic*	— —
2. *Lower Chalcolithic or Ghassulian* (T.S., Teleilat el-Ghassul, south-east of Jericho, in Jordan)	— —
3. *Middle Chalcolithic* = Jericho tell-level VIII ; also Beth-Shan "pits" in original surface of soil with tell-level XVIII above them	Level XVIII of Beth-Shan consists largely of a few walls and bins (on virgin soil) made mainly of small bricks with rounded tops, like the plano-convex bricks of Babylonia. Pottery is of same general type as that in the "pits."
4. *Upper Chalcolithic* ("Esdraelon Culture")	Levels XVII and XVI of Beth-Shan.

		Approximate Overall Dates.	Beth-Shan Levels.	Levels with parallel Egyptian periods (approx.)[7] Dynasties, etc.
Early Bronze	I[8]	*c.* 3200–2800 B.C. ..	XV, XIV,	I–VIII (*c.* 3200–2242 B.C.)
,, ,,	II	*c.* 2800–2300 ,, ..	XIII.	
,, ,,	III	2300–2100 ,, ..	XII, XIB.	IX–X (2242–2060 B.C.)
Middle Bronze	I	2100–1900 ,, ..	XIA.	XI (*c.* 2160–2000 B.C.)
,, ,,	II	1900–1750 ,, ..	XB.	XII (2000–1785 B.C.)[9]
,, ,,	III	1750–1600 ,, ..	XA.	XIII–XVII (1785–1580 B.C.)[10]
Hiatus		.. .. ..	XA, IX (mixed).	
Late Bronze	I[11]	1550–1450 ,, ..	IX.	XVIII (1580–1450 B.C. ; level ends temp. Thuthmosis III, 1504–1450 B.C.).
,, ,,	II	*c.* 1450–1365 ,, ..	VIII, VII.	XVIII (1450–1320 B.C. = "Pre-Amenophis III" to death of Horemheb). [XIX (1320–1318 B.C. = Rameses I)][12].
,, ,,	III	1365–1200 ,, ..	VI.	XIX–XX (1318–1198 B.C. = Sety I to Sethnekht).
Early Iron	I[13]	XIIth–Xth cents. B.C.	V.	XX (1198–1166 B.C. = Rameses III).
,, ,,	II[14]	IXth cent. B.C. to beginning of VIth.	IV.	XX onwards (= last year of Rameses III until 330 B.C.).
,, ,,	III[15]	*c.* 550–330 B.C.		
Hellenistic, Seleucid, Jewish & Roman		*c.* 330 B.C.–A.D. 329	III.	— —
Byzantine		A.D. 330–636	II.	— —
Arabic, Crusader, etc.		A.D. 636–XIXth cent.	I.	— —

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NOTES

[1] The *overall dates* of the various " Bronze " Ages of Palestine quoted in our table are based on those of C. F. A. Schaeffer, *Stratigraphie Comparée et Chronologie de l'Asie Occidentale*, 1948, p. 212 (Early Bronze to Late Bronze II—*various sites*), p. 194 (Early Bronze III to Late Bronze III—*Beth-Shan*). Schaeffer's datings in some respects as well as his idea about the simultaneous occurrence of earthquakes in whole regions, are, however, not accepted by all authorities. As to the early use of copper in Palestine, see W. F. Albright, *The Archaeology of Palestine*, 1945, p. 65. In Egypt copper (*which was introduced from the north*) was unknown before the Badarian prehistoric period, while bronze did not come into general use before the Middle Kingdom, *c.* 2160 B.C. A. Lucas, *Ancient Egyptian Materials and Industries*, 1948, pp. 228 ff. So far as Mesopotamia is concerned, as I am informed by Sir Leonard Woolley, the Al-'Ubaid period is chalcolithic. The real metal age, he says, seems to begin with Uruk, but whether any of the metal is bronze or all of copper is uncertain. In the Early Dynastic Period bronze is in regular use and then, in the Sargonid, copper comes back again. In the extreme north of Syria the contacts being with Mesopotamia the dates go accordingly. The chronology given in our table for Early Iron Ages I, II and III of Palestine is that of W. F. Albright, *op. cit.*, pp. 110 ff.

[2] Cf. my remarks in *QS.*, 1928, pp. 75 f., 110. On many cult-objects from Beth-Shan the serpent (perhaps Tammuz) is found in association with the dove (evidently Ashtoreth). However, at least in the time of Thuthmosis III, the tutelary deity of Beth-Shan was Mekal who seems to have been associated with Resheph and other deities.

[3] E. W. Gardner and D. M. A. Bate, in *Nature*, 1937, pp. 431 ff. Modern opinion tends to believe that most if not all of the so-called " eoliths " found in Europe and elsewhere were made by accidents, such as soil-slip, of natural forces. Cf. K. P. Oakley, *Man the Tool-Maker*, 1950, pp. 6 f. ; W. Watson, *Flint Implements*, 1950, p. 28. I must mention here that authorities are not all agreed on details of the earlier Palestinian Ages, especially, as we shall see later, the Chalcolithic.

[4] There is no space in this article to give information about the artifacts of the Middle Palaeolithic and succeeding Stone Ages ; this will be found in the works of the authorities mentioned in the Bibliography at the end of the table. The artifacts of the Lower Palaeolithic Age were described because of their association with the rise of man in Palestine.

[5] The details about the Neolithic and Chalcolithic periods of Jericho are taken from the reports of Professor J. Garstang, a review of which, by Miss K. M. Kenyon, appears in the *QS.*, 1950/51, pp. 101 ff. Miss Kenyon herself later carried out excavations on the site ; see Bibliography.

[6] W. F. Albright, *op. cit.*, p. 65, classifies the Chalcolithic Eras as follows :—1. *Early Chalcolithic :* Jericho tell-level VIII and several sites in the Wady Ghazzeh at southern end of Palestine. 2. *Middle Chalcolithic :* Ghassulian. 3. *Late Chalcolithic :* Beth-Shan tell-levels XVIII–XVI and the Aenolithic of Byblus. But it is apparent that more excavations are necessary in order to clarify the details of the Chalcolithic Eras as a whole.

[7] The dynastic dates are after É. Drioton et J. Vandier, *L'Égypte*, 1946, pp. 597 ff.

[8] For details of Egyptian and Palestinian associations from the Early Bronze I onwards see my *Catalogue of Egyptian Scarabs, Scaraboids, Seals and Amulets in the Palestine Archæological Museum*, 1936, pp. xiii ff., and Supplement to same in *The Quarterly of the Department of Antiquities in Palestine*, VIII, pp. 72 ff. The oldest inscribed Egyptian object so far found in Palestine is a cylinder seal from the Plain of Sharon; it dates from Dynasty I. The text names two persons, Akh-tekhi(?) and Matit(?)-tekhi(?). *Catalogue*, etc., p. 233.

[9] A beautiful amethyst scarab of Senwosret I (1970–1936 B.C.), of Dynasty XII, came from the temple of Thuthmosis III in level IX, while a Babylonian cylinder seal of lapis lazuli (dating between the XIXth–XVIIIth cents., B.C.) was unearthed in the temple of

Amenophis III in level VII. The seal belonged to " Manum, the diviner and servant of the god Enki (*i.e.*, Ea) ". Both objects are published in my *Topography* (cf. Bibliography), Pl. XXXIV.

[10] Objects of the Hyksos period (Dynasties XV, XVI, 1730–1580 B.C.) were found in level XA.

[11] " Late Bronze I " = " Beth-Shan level IX " ; cf. C. F. Schaeffer, *op. cit.*, p. 207. But owing to a disturbance most of the pottery in level IX is Late Bronze II ; *op. cit.*, p. 193.

[12] The remains of the so-called " Rameses I era " may actually have belonged to a " hiatus " between levels VII and VI.

[13] The Judges and United Monarchy of biblical history.

[14] The Divided Monarchy. Some notes on Egyptian objects and ivories from Samaria and dating from the period of the Israelite Kingdom (870–722 B.C.) will appear in my *Egypt and Samaria*, in *Journal of the Manchester Egyptian and Oriental Society*, 1954. The so-called " Lady at the Window " shown in one of the ivories is actually Hathor, as I have indicated in *QS.*, 1933, p. 99.

[15] The Exile and Restoration.

[16] This does not include the names of the works cited before.

[17] Some of the conclusions in Neuville's latter article have to be modified in view of recent finds.

[18] Other articles of mine, some with coloured plates, have appeared in *The Illustrated London News*, 1925, Decr., 26 ; 1926, Oct. 30 ; 1927, Nov. 12, Nov. 26 ; 1928, Decr. 8, Decr. 15, Decr. 22.

[19] I hope shortly to publish a table of the Egyptian Prehistoric and Historic Ages. For the historical periods of the Western Desert and Cyrenaica the reader may consult my *Contribution to the Archaeology of the Western Desert*, Parts I and II, in *Bulletin* of John Rylands Library, September, 1953, March, 1954.

מְאֹד IN I. SAMUEL xx, 19

By A. GUILLAUME

In recent years Old Testament scholars in England have shown an increasing sense of responsibility in their handling of the Hebrew text and an increasing reluctance to claim that it is corrupt. They acknowledge that they do not know all that is to be known about the vocabulary of the ancient Hebrews. It is now generally held that the Massoretic Text should not be altered unless it is impossible (*a*) to make sense of it as it stands, or (*b*) to reconcile it with the principles of Hebrew grammar. But even so when the versions offer a different reading scholars are apt to follow them and to alter the Hebrew text so as to make it conform with the reading that they imagine that the versions had before them. This at first sight would seem to be sound commonsense, and so it is ; but it is not a principle which can be applied indiscriminately always and everywhere, for the simple reason that if we cannot understand a certain phrase the fault may lie in our ignorance of a dead language and not in the language itself.

It is obvious that if the early translators did not understand a passage and were in the same difficulty as the modern translator they could not write down rubbish and expose their ignorance to the world if there was any way out of the difficulty, and so they produced a rendering which obscured their ignorance and passed unnoticed by the reader ignorant of the words of the original Hebrew.[1] On some occasions, it is true, they gave up in despair and simply transliterated the Hebrew word ; but as a rule they set down what they thought was the meaning of a passage. Examples of misunderstanding and ignorance of the meaning of words are so common that there is no need to cite any.

In attempting to defend the M.T. in the Book of Samuel one is not holding the strongest possible position, for it must be admitted that the text of the MSS. on which this book rests has suffered corruption in transmission ; but to admit that is not to claim that we are authorized to alter the text whenever it fails to say what the ancient translators suggest that they read when they made their versions.

With this reservation in mind let us turn to I. Sam. xx, 19 וְשָׁלַשְׁתָּ תֵּרֵד מְאֹד which the R.V. renders " and when thou hast stayed three days thou shalt go down quickly " with a note in the margin to the effect that the Hebrew has " greatly ". In passing it may be said that a much more probable trans-

[1] The same thing has happened in the AV. and to a lesser degree in the RV. Critics often complain that the translators have concealed the difficulty of a passage, but what else could they do ?

lation would be " on the third day thou shalt go down ". Now, since much turns on what is meant by these three days we must look at the references to the newmoon and the two following days :

i. v.5. " Tomorrow is the newmoon and I must sit with the king . . . let me go and I will hide myself in the open country until the evening " (the third?).

ii. v.12. " I will sound my father about this time tomorrow " (the third?).

iii. v.18. " Tomorrow is the newmoon and thou wilt be missed, because thy seat will be empty (lit. missed) ".

iv. v.19. On the third day thou shalt go down *me'ōd* and come to the place where thou didst hide thyself on the day of the affair and shalt stay beside yonder mound ".[2]

v. vv.24–25. " David hid himself in the open country. And it was the newmoon. The king sat down to eat . . . And David's place was missed ".

vi. v.26. " Saul said nothing that day ".

vii. v.27. " On the morrow of the newmoon the second (day) David's place was missed. Saul said ' Why has the son of Jesse not come to eat neither yesterday nor today ? ' " (Jonathan confessed that he had let David go and Saul swore that he would kill David.)

viii. v.34. " Jonathan got up . . . and ate not on the second day of the month ".

ix. v.35. " In the morning [i.e. the fourth day] Jonathan went out into the open country to keep his appointment with David ".

The day from which the numbering of the days begins is the day when David and Jonathan met together to discuss what was to be done, namely the day before the newmoon. Jonathan undertook to sound his father on the morrow, the newmoon ; but as Saul said nothing Jonathan did not venture to speak to his father about David. On the morrow of the newmoon the king declared his hatred of David and the morning after Jonathan went to meet David as they had arranged. Therefore it follows that when Jonathan said (v.19) " on the third day thou shalt go down " he meant the second day of the month, the very time at which his dangerous quarrel with his father about David took place. He had taken a serious risk with David's safety because (v.9) he did not really believe that his father had designs on David's life. But had he carried out his intention (v.12) of sounding his father on the newmoon David might well have failed to get away in time if he did not hide himself until the third day. David himself perceived the danger and so (v.5) he said that he would go into hiding on the newmoon, and he actually did so (v.24). In passing it may be observed that the grammatically difficult word הַשְּׁלִשִׁית in vv. 5 and 12 is almost certainly a marginal gloss which was inserted by someone who saw that David actually stayed in hiding until the

[2] For the translation of the last two words see the commentaries.

fourth day. In the latter verse the Targ. writes " *or* the third day " thus making it appear that Jonathan did not definitely commit himself to speak to his father on the second day of the newmoon, and we may well regard that reading as a gloss on a gloss.

We are now in a position to consider the words of Jonathan (v.19) which, if מְאֹד is given the sense it normally bears in Hebrew must mean " on the third day thou shalt go down very low " (lit. ' exceedingly ').[3] Everyone would agree with S. R. Driver's note[4] " To *go down* is an idea which, as used here (Jud. xix, 11 is different), would not be qualified by *greatly* ". This was evidently the opinion of Tar. and Pesh. which imply תִּפָּקֵד " thou wilt be greatly missed ".[5] But it is the Septuagint which though it gives us the same verb shows us that it was the common word מאד (which of course had no vowel points) that caused the trouble. It omits it altogether. Where we should expect *σφόδρα*, their normal rendering of מאד, they leave the word untranslated. This is of the utmost significance. They could not, like modern writers, translate it with its verb and so they left it in the air and wrote what they thought that the author intended. The two later versions went one better : they kept מאד but as H. P. Smith wrote : " That David would be more missed on the third day than on the second is true. But there was no reason to suppose that Saul's mind would not be discovered on the day following the interview ". We may add that that was undoubtedly what Jonathan thought and said in v.12.

However it is not necessary to alter the MT. at all. It could bear a meaning which is admirably suited to the context : מאד pointed מָאֹד would in Arabic mean " nightfall." Lane[6] explains the verb[7] thus : " *It* (the day) *receded* in the evening. *It* (the evening) *declined. ādat al-zilāl The shadows*

[3] Cf. Ps. xcvii, 9 " Thou hast exalted thyself very high ".

[4] *NHTBS.*, p. 167. Prof. G. R. Driver in *Analecta Lovaniensia Bib. et Or.*, 1950, Ser. II, Fasc. 20,348 made the interesting suggestion that in Jud. xix, 11 רָד should not be altered to יָרַד as most commentators demand, but should be pointed רָדַד ' was restless ', unsettled', so that the meaning would be that the weather (lit. ' the day ') was unsettled. However, it is worth noticing that (*a*) the Massoretic pointing רָד suggests that it is a *Qerē* indicating that they read יָרַד ; and (*b*) from v. 8 to v. 16 there is an orderly progression in time. The father-in-law asked the pair to delay until the day declined (נטה) *i.e.*, until the afternoon. Then later he made the excuse that the day had waned (רפה) towards sunset, adding ' Look at the decline (חנה) of the day '. The husband refused to stay longer, and as he neared Jebus the day had sunk at nightfall or, keeping the Massoretic pointing, ' very low '. The last stage was reached when the sun disappeared (בא) when they were by Gibeah.

The probabilities are nicely balanced. Prof. Driver's suggestion preserves the *ductus litterarum*. On the other hand if we add a *yōd* to the text the gradual approach of night is eloquently described.

[5] *ICC*, p. 190.

[6] *Arabic-English Lexicon*, 124a.

[7] The noun *ma'ād* is not mentioned in any dictionary, but morphologically it in no way differs from *ma'ād* (which resembles it in meaning) and similar forms.

returned and inclined towards the west". The *Lisānu'l l-Arab* quotes a verse which might have been uttered by David on this occasion :

" I stayed there a summer's day until
I saw the shadows of its morrow returning ". (*ta'ūdu*)

Jonathan advised David to make for the mound before it was quite dark and conceal himself beside it until he could come and give him news of Saul's attitude towards him where none would see their meeting. Thus understood מְאֹד is seen to be the all-important word : by going at nightfall on the day after the newmoon David, in Jonathan's opinion, would be safe until the morning, because Saul would be told (v.28f.) that he had gone to Bethlehem. Had he been seen going to the mound in broad daylight the lie about Bethlehem would not save him if, after all, the king had resolved to kill him.

ANOTHER GRIFFIN SEAL FROM SAMARIA

By R. B. Y. Scott

The seal here illustrated and described was purchased from a villager at Sabasṭia in March 1951, and was reported shortly afterwards to Mr. Lankester Harding, Director of Antiquities, who kindly authorized the publication of this note.

Fig. 6.

The seal is of black steatite, roughly scaraboid in shape, with plain domed back. Its measurements are 1.9 cm. × 1.75 cm., with a thickness of 0.5 cm. on the sides and 0.9 cm. at the centre. The vertical sides converge slightly toward the base, and are plain, except for two lightly-incised horizontal lines on one side. The seal is pierced lengthwise, apparently by two operations, since the bore is not straight.

The surface of the base on which are the design and the inscription is marred by chipping, scratches and small round pits (apparently due to weathering); these confuse the outlines both of the design and of the inscription. The design is deeply incised except for the line from the back of the head to the base of the wing, but it is roughly executed with little attention to detail. The inscription is less firmly cut, and some of its lines are faint.

The design exhibits a winged griffin *couchant*, as on the *lḥym* seal from Tell el-Far'ah[1]; on the two seals in the British Museum inscribed respectively

[1] Petrie, *Beth Pelet*, I, Pl. xxxv, 427; Diringer, *Le Iscrizioni Antico-Ebraiche Palestinesi*, p. 170, Pl. xix, fig. 8; Reifenberg, *Ancient Hebrew Seals*, p. 32, fig. 11; Reifenberg, *Ancient Hebrew Arts*, p. 31, fig. 4.

lzkr hwš' and *yḥzq*[2]; and on the *lrp'* seal in the private collection of A. Reifenberg[3]. Chest, belly and rump of the griffin are indicated by three oval depressions. The emphasized belly seems to be unique among seal representations of the griffin, and may suggest that the creature is portrayed as a pregnant female. The curved upright tail resembles those on the *lpṭ's* seal, also from Sabasṭia, published by Ben-Dor[4], the *yḥzq* seal from Shechem[5], the scarab (again from Sabasṭia) in the Palestine Archaeological Museum numbered 886 by Rowe[6], and the *'ḥz pqḥy* seal in the Berlin State Museum[7]. The wings are straight rather than curved, a feature which Ben-Dor finds to be characteristic of the " Phoenician " adaptation of the Egyptian falcon-headed griffin[8]. The head is apparently that of a bird, though it is represented only by a deep triangular gouge in the stone and is difficult to visualize. Under the mouth is a deep, almost circular depression which looks at first like a beard, but is more probably an accidental enlargement of a downward-curving beak, as in the *lḥym* seal. Whether the engraver intended the Egyptian double crown over the head is doubtful; three shallow parallel grooves above the head seem to be due to scratching or pitting rather than to intention. On the *'ḥz pqḥy* seal the griffin is without a headdress.

It is noteworthy that at least four other seals or sealings from Samaria and vicinity, datable to the 8th–7th centuries B.C. show representations of winged griffins[9]. All of these, however, appear to be better executed than the example under discussion here. Not only is the head barely suggested by the triangular gouge, but the lines of shoulder and neck are neither leonine nor birdlike. The line marking the front of the breast is continued down into the oval depression representing the breast, as if the engraver's tool had slipped. At the bottom, this line is crossed by two of four short parallel lines which may represent a kilt[10]. Above the head on the margin of the seal is a short, broad line which looks like part of the inscription, but more probably indicates the sun-disk, which is similarly represented, and in the same position relative to the head, on a scarab illustrated by Ben-Dor[11].

The reading of the inscription is made difficult by the worn surface, and by the fact that the lettering was evidently added by a different engraver who has carelessly allowed it in places to overrun the design. He was stupid

[2] Diringer, *op. cit.*, pp. 204–205, 241–242, Pl. xx, fig. 16, Pl. xxi, fig. 20; Cooke, *North Semitic Inscriptions*, p. 362, Pl. 11, fig. 7.

[3] Reifenberg, *Ancient Hebrew Arts*, p. 31, fig. 5; Reifenberg, *Ancient Hebrew Seals*, p. 41, fig. 32.

[4] Ben-Dor, *A Hebrew Seal from Samaria*, Q.D.A.P., vol. xii, pp. 77–83; cf. Reifenberg, *Ancient Hebrew Seals*, p. 31, fig. 9; Moscati, *L'Epigrafia Ebraica Antica* 1935–1950, p. 55, Pl. xi, fig. 12.

[5] Diringer, *op. cit.*, pp. 241–242, Pl. xxi, fig. 20.

[6] Rowe, *A Catalogue of Egyptian Scarabs*, p. 208, Pl. xxii.

[7] Diringer, *op. cit.*, pp. 202–203, Pl. xx, fig. 14.

[8] Ben-Dor, *op. cit.*, p. 80.

[9] Cf. Ben-Dor, *op. cit.*, pp. 80–81.

[10] Cf. Diringer, *op cit.*, Pl. xix, figs. 3 and 7.

[11] Ben-Dor, *op cit.*, p. 81, Pl. xxv, b; cf. Diringer, *op. cit.*, Pl. xxi, fig. 20.

as well as careless, for he has failed to reverse the letters, so that they must be read as on the seal rather than as on its impression. It is possible that, instead, he simply reversed the *order* of the letters, so that they are to be read from left to right.

The usual *lamedh* possessive does not appear. Diringer lists four seals with a similar omission (*op. cit.*, pp. 164–167; 50 Moscati, *op. cit.*, pp. 57–58, 63). However, if the reading is to be from left to right, the *lamedh* may have been defaced when the large chip was dislodged from beside the creature's tail. Next to the tail on the other side, and running into the wing, the letter *nun* is clear. Between the wing and the head is what is most probably *mem*, although alternatively it might be *kaph* or an open-topped Aramaic *beth*. The middle upward stroke is too far to the left for a normal *mem*; it looks like an attempt to correct a vertical mark still farther to the left.

Opposite the griffin's head is a letter very hard to decipher. A deeply incised and almost horizontal line is met at an acute angle by a less firmly cut line, and from the junction of the two a faint line leads to the griffin's head. If the faint line is intentional, it would form the upright stroke of a *waw*. If not, we may have a poorly executed *taw*, *zayin* or *aleph*.

The next letter is almost certainly *yodh*, though the upper horizontal line crosses the upright, producing a form more like the unusual *he* noted in Diringer, *op. cit.*, Pl. xxix–xxx. The final letter is most likely *gimel* or *pe*; it could conceivably be *waw*.

With so many possible variants and combinations it is hard to come to a definite conclusion as to the owner's name. The possibilities can be exhibited as follows:

(*l*)							
n							
m	or	*k*	or	*b*			
w	or	*g*	or	*t*	or	*z*	
y	or	*h*					
g	or	*p*	or	*w*			

If the inscription is to be read from right to left, the most probable reading is (*l*)*nmwyg*. The only name remotely approaching this form in the Bible is *nmw'l*, Nu. 26:9,12; I Chr. 4:24. It is barely possible that the final letter is to be read as *w*, giving the parallel name *nmwyw*. But it is unlikely that the same engraver would make the letter *w* twice and so differently in the same word.

Another possibility is that the engraver reversed the order of the letters but not the letters themselves, and that the name should be read from left to right. In this case, we may have here an Egyptian name, like *pṭ's* on Ben-Dor's griffin seal from Samaria. In this case, the name would be

pywmn or *py'mn*, " the (servant) of Amon ". Spiegelberg[12] gives two examples of theophoric names from a later period (nos. 26 and 38) in which the name of the god is prefaced simply by *p* instead of the more usual *pṯ*, " the one given by ". The name *pynḥs* in Ex. 6: 25 shows that the Egyptian *P'a* could be represented in Hebrew by *py*. The chief difficulty in this suggestion is the reading of the middle letter as ' instead of the more probable *w*. Perhaps *w* is the true reading, and we are to blame the engraver for misspelling as well as for his other faults.

[12] W. Spiegelberg, *Ägyptisches Sprachgut in den aus Ägypten stammenden aramäischen Urkunden der Perserzeit*, in *Orientalische Studien, Theodor Nöldeke zum siebzigsten Geburtstag*, pp. 1093–1115.

ABYDOS AND COMBED WARE

By M. W. Prausnitz

Nearly 60 years ago in the Royal tombs of the First Dynasty of Egypt, Sir Flinders Petrie discovered a piece of pottery of " Amorite Style " [1]. It resembled the combed ware Sir Flinders had found a few years earlier at Tel el Hesy[2] in Israel. In the course of the excavations at Abydos pitchers were found, which again could be paralleled by sherds from Tell el Hesy[3]. These finds became the foundations of the absolute chronology of Palestine and Syria in the Early Bronze Age.

The name " Amorite " was most fitting, as the home of this kind of pottery was Phœnicia, Southern Syria and Northern Palestine. Equally well chosen was the technical description given to this type of ware, namely " combed ware." The decoration was certainly derived from basketry and gained inspiration from the strings wound around the vessel for purposes of transport.

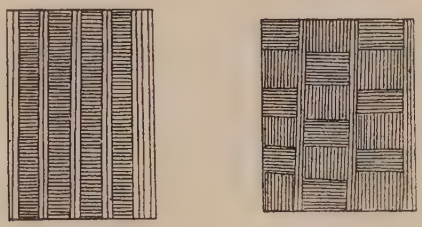


Fig. 7

On inspection three different techniques of combing can be recognised :

(*a*) simple combing—incised lines

(*b*) pattern combing

(*c*) wheel combing (band combing).

(*a*) The first and earliest combing consists simply in combing and scraping lines on pottery. But little chronological significance can be attached to

[1] W. M. F. Petrie: *The Royal Tombs of the First Dynasty*, Vol. I, p. 28, Pl. XXXVIII, No. 9.

[2] W. M. F. Petrie: Tell el Hesy, London, 1891.

[3] *ibid.*, p. 41.

I wish to thank Prof. V. G. Childe and Dr. K. M. Kenyon of the Institute of Archaeology, London, for granting me access to the Tell el Hesy sherds. Also I wish to acknowledge my profound gratitude to Mr. Arkell, curator of the University College collection, who greatly helped me in finding the Abydos sherds.

this type of decoration, universally used on painted pottery. It is found amongst the very earliest pottery of the Levant and the Sudan. The ware is mostly thick, black and full of carbonised vegetable matter[4].

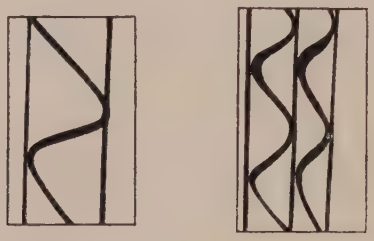


Fig. 8

(*b*) Pattern combing is a superior kind of decoration. Vertical and horizontal lines are combed onto the plain surface, forming attractive designs (see Fig. 7). It is usually found on big storage jars which are extremely well fired and distinguished by their tall and symmetrical shape. Because of the hardness of the clay and its red brick colour, it was called " brick ware " at Jericho. The same kind of ware was called " stone ware " in the Jebeleh region, while the excavators of Megiddo gave it the name of " metallic ware "[5]. This pattern-combed ware seems to be a form of development of the burnished stone ware which is hand-made. The pattern-combed jars, on the other hand, are thinner, more evenly baked and, which is more important, the flaring rim and upper part of their bodies are wheel-made. They were not covered by a slip, nor were they burnished.

(*c*) Wheel-combed decoration, frequently named " band-combing ", succeeded pattern-combing towards the end of the Early Bronze Age and the beginning of the Middle Bronze Age of Palestine and Syria. In this type of decoration straight horizontal bands alternating with wavy lines move around the body of the vessel in accordance with the turn of the wheel. Generally the pots are wheel-made (see Fig. 8).

We are here mainly concerned with " pattern-combing ". The distinctive form of these large vessels, the hard, high-ringing clay and wheel-made finish bear witness to a great advance in the potter's art. The decoration as well as the vessel can easily be recognised and traced. It is essential for the purpose of this study to realize that the three qualities of this ware : pattern-combed

[4] M. Dunand: *Rapport préliminaire sur les fouilles de Byblos en* 1948. *Bul. Musée de Beyrouth*, Vol. IX, p. 56–58.
A. J. Arkell: *Early Khartoum, O.U.P.*, 1949, Chaps. IX–X.

[5] Ann M. Ehrlich: *Early Pottery of the Jebeleh Region*, Philadelphia, 1939, Chaps. Types XI and XII.
Engberg and Shipton: *S.A.O.C.*, No. 10.

decoration, hard-baked clay, wheel-made finish of upper part with a flaring, i.e. everted rim, are usually found together (Figs. 9, 10, 11 and 12).

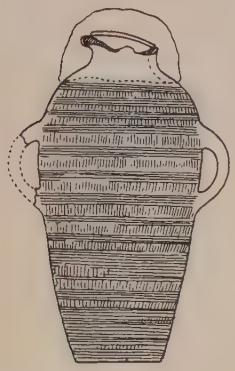


Fig. 9

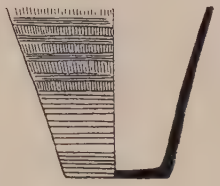


Fig. 10

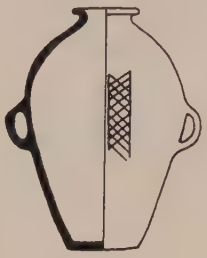


Fig. 11

Fig. 12

Pattern-combed jars in Egypt.

The assumption that combed ware from Palestine and Syria was contemporary with the Abydos pitcher of the First Dynasty of Egypt is based on the sherds found by Petrie at Abydos. Dr. H. Kantor of Chicago collected all the material available and, in her chart, the two small combed sherds[6] figure as latest. But Scharff's description of these two sherds in Leipzig as thick, black sherds of crude vessels is more characteristic of the Syrian " neolithic " ware, or, as has often been suggested by many, including Scharff himself, of Nubian combed ware[7].

Petrie also found a two-handled storage jar in the tombs of the Courtiers of the First Dynasty. This jar was " wheel-turned inside and finished by diagonal scraping " and when knocked it had the high ring of metallic ware[8]. This vessel undoubtedly does belong to the simple combed, hard stone ware and though it may date later than the First Dynasty, it does anticipate our pattern-combed storage jar. Unfortunately this vessel was left on the site. In the tombs of the Courtiers, at any rate, no Abydos pitcher was found.

One very good example of pattern-combed storage jars was found by G. Brunton[9] and belonged to a Tomb-group of the IV-V Dynasties. It is described as follows : " the large two-handled jar with its surface combed first vertically then horizontally is almost certainly from some foreign source . . . " The vessel is now in the British Museum and in all respects conforms

[6] J. H. Kantor: *The Early Relations of Egypt and Asia, J.N.E.S.*, Vol. I, p. 208–9.

[7] Alexander Scharff: *Die Altertuemer der Vor- und Fruehzeit Aegyptens*, Berlin, 1929, p. 194.

[8] F. Petrie: *Tombs of the Courtiers*. London, 1925, Pl. iv, 9.

[9] G. Brunton: *Matmar*, London, 1948, p. 45, Pl. xxxvii.

with pattern-combed storage jars from Syria and Palestine[10]. Its shape is a little more elongated than one might expect. (Pl. XIX.)

Similar storage jars, but of the VIth Dynasty, were found at Saqqara South and Giza. One of them is reported to be in the Cairo Museum[11]. Jequier, who excavated two of them from two tombs, was able to prove that they belonged to the VIth Dynasty (Pepi II)[12]. They had been owned by two Court officials, titled among others " overseer of the bath." Is it possible that they contained the renowned oil of Syria for the Court of Pharaoh ?

Abydos Pitchers from Egypt.

Probably more handled pitchers of the so-called Abydos type were found in Egypt, than in their own home in Syria. Here we are faced with a genuine and obvious difficulty. The pitchers vary greatly. Some, for instance, are of the metallic ware and appear to have no handles, while others less well fired, with handles, are quite atypical of the Palestinian and Lebanese vessels. Most conspicuous of all are the well-known painted pitchers. The painted pitcher is a stranger in Palestine and Southern Syria but has been found as far north as Judaidah in the Plain of Antioch[13]. Thus we have evidence of the wide trade and influence exercised by Egypt from the middle of the First Dynasty onwards. The many varied Syrian handled jars indicate the great power and attraction the united Nile Valley had for the nations of the Levant.

During recent years a very great number of Tombs of the first two Dynasties of Egypt has been excavated[14]. At Helwan in four seasons no less than 3,644 tombs were opened yielding nine different types of handled pitchers. Prof. Emery found two types of Syrian pitcher in the First Dynasty graves at Saqqara[15]. There was also an alabaster imitation of the handled pitcher[16]. Yet from these many tombs, not one single pattern-combed jar or even sherd was reported[17].

Palestine and Syria.

The Palestinian and Syrian sites where one or more of the different types of handled pitchers known from Egypt were discovered are numerous indeed[18].

[10] I am most grateful to Mr. Edwards of the British Museum for assistance and permission to study and to photograph the pot.

[11] Régistre d'entrée No. 52523.

[12] J. Jequier: *Tombeaux de particuliers contemporains de Pepi II*, Cairo, 1929, p. 13–15, p. 25.

[13] R. J. Braidwood in *J.N.E.S.*, Vol. I, p. 198, note 141.

[14] Macramalla: *Cimetières archèiques*, Cairo, 1940.

Saki Y. Saad: Royal excavations at Helwan, Cahiers Nos. 3 and 14, Cairo, 1949, 1951.

[15] W. B. Emery: *Tombs of the First Dynasty*, Cairo, 1949, p. 152.

[16] *ibid.*, Type D.D. 1.

[17] I am much indebted to Prof. Emery who confirmed with me the absence of combed pottery from his excavations.

[18] As shown below, Abydos types of jugs were found in Palestine among others at Tell el Hesy, Ay, Jericho, Megiddo, Tomb nr. Kh. Kerak and Tell el Fara nr. Nablus. They are reported, unpublished, from Tell ed Duweir (Lachish), Kh. Kerak, Tell Eklatiya nr. Tiberias.

At Ay the handled pitcher was found among the burnt layer of "parquet B"[19]. The succeeding layer C was identified as contemporary with the Third Dynasty[20]. After that date Early Bronze Age Ay ceased to exist. The catalogue of the finds does not contain one pattern-combed sherd or storage jar ! Tell el Farah near Nablus was destroyed according to Père de Vaux in Early Bronze IIB. The metallic Abydos pitcher was in the last layer[21] which the excavator dated at 2800 B.C. Amongst the published finds there is not one pattern-combed jar though some odd combed sherds are reported to have been found. In the northern part of the Jordan Valley on the highway from Northern Syria to Egypt near Kh. Kerak a tomb group of some fifty vessels was found including one Abydos pitcher and a little round jar decorated with painted triangles, filling dots and lines exactly like the painted Abydos pitchers[22]. The remarkable fact about this group was that no Kh. Kerak ware was discovered. Pattern-combed ware was apparently also absent.

In Northern Palestine, at Megiddo, three types of handled pitchers resembling the Abydos pitchers have been found. The chart showing the results of the excavations indicates that the stump-based handled pitcher appears during stages VI-IV. Later during stages III-I the flat-based pitcher of metallic ware is shown together with pattern-combed metallic pottery[23] (Pl. XX.). The chronology worked out for Megiddo was mainly based on the alleged contemporaneity in Egypt of stump-based, flat-based pitchers and combed-ware. Stage III was believed to be contemporary with the end of the First Dynasty or the beginning of the Second Dynasty. From stage III metallic Abydos pitchers continue to occur together with pattern-combed ware, while the stump-based pitcher was going out of use. The range of the flat-based handled pitcher is very considerable and may well overlap with the rise of pattern-combed pottery. The equation, however, with Abydos and the First Dynasty still remains to be proven.

Fig. 13

At Ras Shamra, Prof. Schaeffer found pattern-combed jars (Fig. 13) together with Kh. Kerak ware as late as "ancien ugarit 3". There were no Abydos pitchers[24]. The lowest level at Tell Beth Mirsim level J, produced pattern-combed ware[25]. Again there were no Abydos

[19] Marquet-Krause: *Fouilles d'Ay*, Cat. No. 2538.

[20] W. F. Albright: *Archaeology of Palestine*, p. 76, Pelican ed.

[21] Père de Vaux: *R.B.*, Vol. LV, p. 555, fig. 4.

[22] B. Maisler: Early Bronze Age Tomb nr. Kinneret (Kh. Kerak). *Bul. of Jew. Pal. Expl. Soc.*, Vol. X, Pl. I.

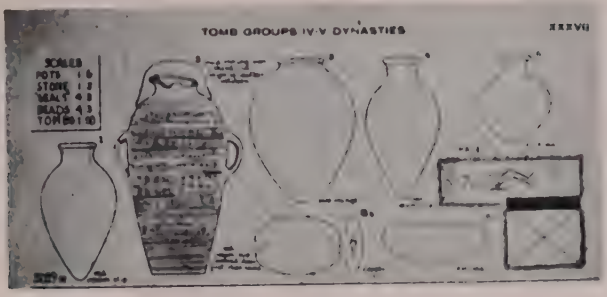
[23] Engberg and Shipton: *S.A.O.C.*, No. 10, Type 8c, Stage VI–IV.
Shipton: *S.A.O.C.*, No. 17, Types 3, 11, a.b.d. III–I.

[24] C. F. Schaeffer: *Ugaritica II*, p. 236, figs. 7, 8, 12.

[25] W. F. Albright: *A.A.S.O.R.*, Vol. XII, Pl. II.

pitchers, nor was there any Kh. Kerak ware. It is known that Tell Beth Mirsim was founded near the end of the Early Bronze Age of Palestine.

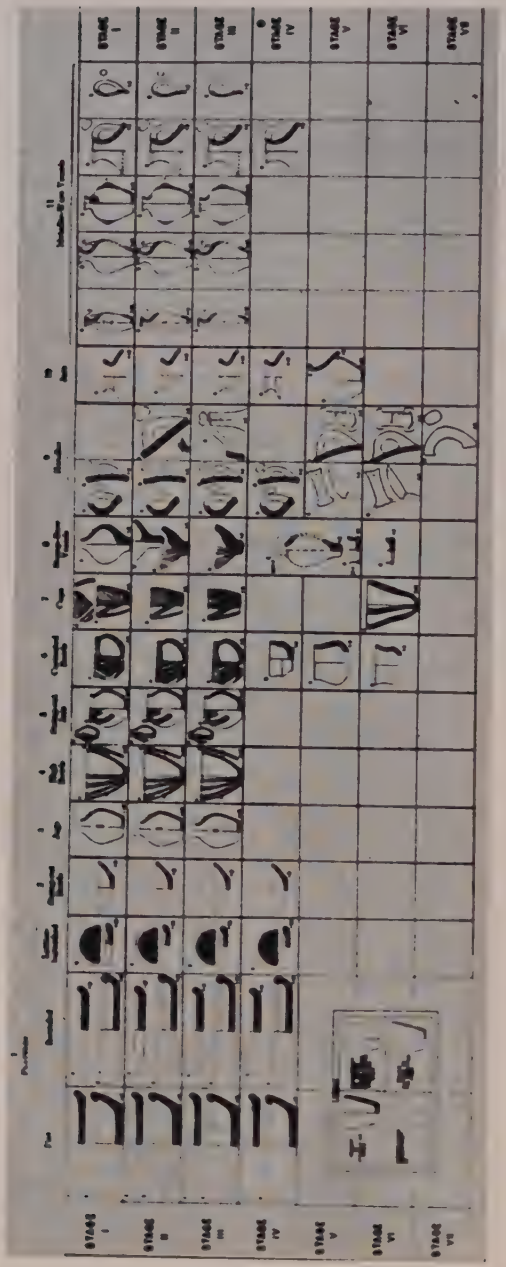
From the foregoing discussion a coherent picture seems to emerge, into which the evidence from Egypt, as well as that from Palestine and Syria appears to fit. Only careful future excavations of the Early Bronze Age levels in Palestine and Syria can confirm it. During the reign of the later Pharaohs of the First Dynasty the Abydos pitchers began to arrive in Egypt from all parts of the vast area of Syria and Palestine. By the time of the Third to Fourth Dynasty pattern-combed vessels of hard clay and finished by wheel, spread north and south. On the way south, pattern-combed pottery mingled with the painted pottery of southern Palestine. There it continued to flourish until the fall of the Old Kingdom, when it was ousted by the characteristic wheel-combed ware of the end of the Early Bronze Age.



"Matmar". Pl. XXXVII.

[*Photo by courtesy of the British Museum*

Pl. XIX. Pattern-combed Storage Jar.



Megiddo Stages.

TWO CHALCOLITHIC VESSELS FROM PALESTINE

By J. KAPLAN

The first appearance of pottery in Palestine is attributed to the Neolithic Age. Only a few intact vessels were discovered, but a close examination of sherds shows that the vessels were limited to a number of simple forms only, thus supporting the idea that we are at a stage of the beginning of this imported Art. The Chalcolithic Age which follows the Neolithic is distinguished by the extensive production of pottery vessels and development of forms. It is probable that most of the pot-forms which are known later in the Bronze Age and Iron Ages were born at this time.

Our intention in this article is to deal with two exceptional pot-forms which, though they first appeared in the Chalcolithic Age, did not last long and vanished towards the end of it, failing to pass into the Bronze Age. The vessels are known today as the "Churn" and the "Bird Vase" ("vase en forme d'oiseau").[1] The first was named by the author and the other by the excavators of Teleilat-Ghassul.

The "Churn"

The vessel comprises two parts: the horizontal part resembles an elongated egg, one of whose narrow walls is truncated. There are two ear-handles attached to this part. The second, upper, part of the vessel is vertical and resembles a cup (Fig. 14).

Fig. 14

The first two intact vessels of this kind were discovered by the author, one in 1945 at El-Mughar by Rehovoth and the other in 1950 at Tel-Aviv; both were found in a Chalcolithic assemblage belonging to the Ghassulian stage. Before these two discoveries this type of vessel was entirely unknown. Fragments belonging to the truncated edge which were discovered in many other Chalcolithic sites in Palestine were thought to belong to a cup and so excavators stood it at right-angles to its proper position of rest, thinking that the handle was rightly fastened to the base of the seeming cup. Such was the case at Teleilat-Ghassul, Wadi-Ghazzeh, Um-Qatafa etc.[2]

[1] For "Churn" see A.J.A., 1951, p. 856, fig. 7; "Bird Vase", A. V. Mallon and others, Teleilat-Ghassul I, Rome, 1934, p. 107, pl. 50.

[2] Teleilat-Ghassul I, p. 3, fig. 59:3; E. Macdonald, Beth-Pelet II, Prehistoric Fara, London, 1932, pl. XL:35; R. Neuville and A. Mallon, *Les débuts de l'âge des métaux dans les grottes du désert de Judée*, Syria XII, 1931, pl. XVIII.

Undoubtedly, the use to which this vessel was put is of great interest. It appears that it was used for churning milk. This conclusion is supported by certain customs observed among the Fellahin and Bedouin. Only after one has seen the contemporary Arab churn made of skin, can one understand why the clay churn has a peculiar and asymmetric shape.

The Arab liquid-container is made of goat's skin. Skins used for this purpose are cured differently from those used for other purposes; they are especially fashioned to meet the needs of a liquid-container. The skin vessel has a cylindrical shape somewhat resembling a fatted pig. These goatskins served many purposes: for storing and carrying water, oil, milk as well as for churning butter. The goatskin water bottle is known as the " kirbeh " whereas the goatskin used for churning butter has a different name, being known as " Mahadd ", which may be translated as " to strike ".

In his book *Arbeit und Sitte*, vol. V, Professor Gustav Dalman publishes a photograph (no. 40) of an Arab woman from Ramallah churning butter in such a goatskin. The walls of this goatskin are asymmetrical at its two extremities. The one, formed from the neck of the goat, is shaped like a cone; the other formed from the posterior of the animal, is flat. The sleeves formed by the skin of the legs serve for tying the ropes used for hanging the churn to a tripod or a tree.

The churning is done as follows: the churn is tied at its extremities to a tripod or a branch of a tree and is then filled with milk for churning. Thereafter the swinging movement in the direction of the truncated end starts. The rocking motion is much eased for the rocker as the churn hangs from the tripod and is not held by him (Pl. XXI).

A comparison of the lower horizontal portions of the clay and goatskin churns will show that except for the ear-handles at the extremities of the churn, they are made according to the same principle, viz., a horizontal, cylindrical body with one end truncated forming thus a flat wall and the other shaped like a cone. The conical part of the clay churn is the transmuted neck of the goatskin, while the truncated end is the posterior (see Fig. 15).

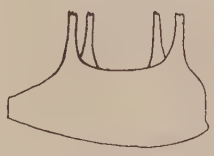


Fig. 15

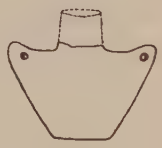
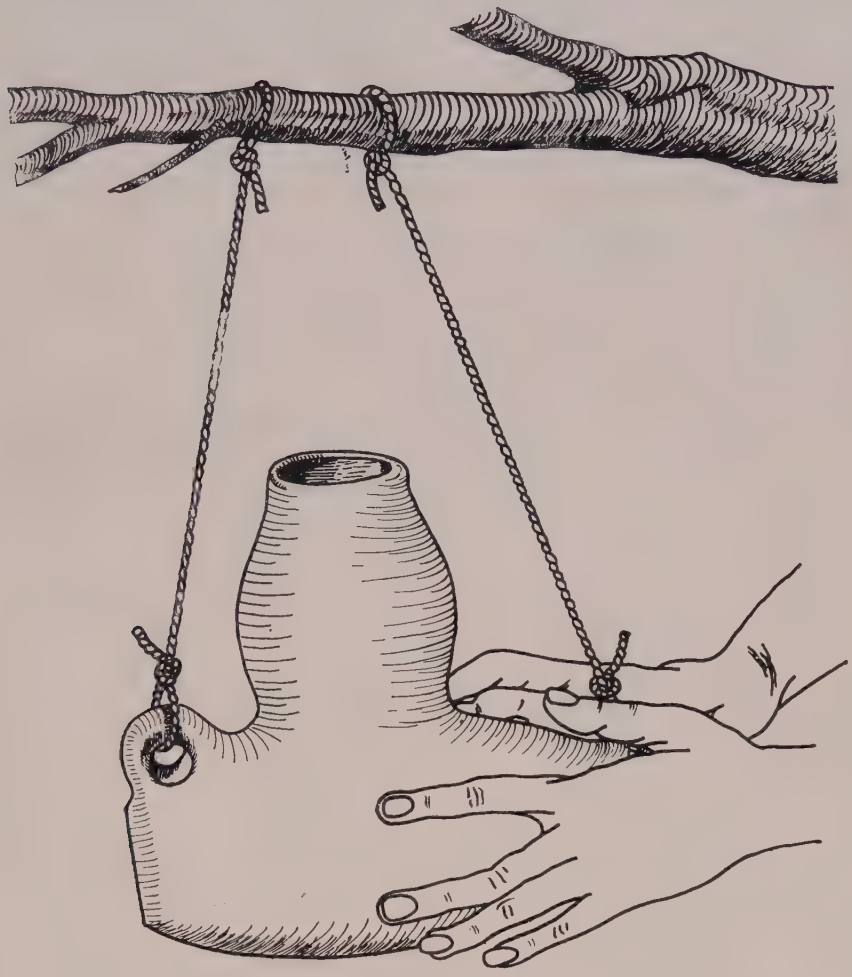


Fig. 16

The " Bird Vase "

Another interesting vessel from the Ghassulian stage is the so-called " bird vase " discovered for the first time at Teleilat-Ghassul and named thus because of the slight resemblance between its pierced handle-end



Pl. XXI. The Churn.

and a bird's head.[3] It is noteworthy that there is actually no ground for this name such as there is for the zoomorphic vessels of similar name which are known in the Bronze Age. The " bird vase " of the Bronze Age is a real imitation of the bird's body (see Fig. 16).

The vessel of the Chalcolithic Age is made up of two parts. The main, horizontal portion, is trapezoid in shape and stands on its shorter base. There are two pierced handles at the two upper extremities of this part. The short, vertical part, attached to the centre of the horizontal one, is cylindrical and serves as the mouth of the vessel. So far, three types differing mainly in their size, have been distinguished amongst the examples discovered at Teleilat-Ghassul. Fragments of a similar vessel were discovered in the 'Affula excavations (pit B, below the floor) together with some sherds of the Ghassulian stage.[4]

We must now attempt to explain the purpose of the bird-shaped vessel and its specific shape. Again, it may be assumed that we have before us a clay vessel whose immediate forebear was a similar one of goatskin.

What then was the skin vessel which served as the prototype of the " bird vase "? It is highly probable that it was modelled on the shepherd's goatskin water bottle. The shepherd's water bottle is made of a lambskin or a kid's skin, being formed by the folding of the skin breadth-ways and sewing the edges, including the skin of the legs, together. The ends formed by the " spliced " leg skins are tied to a leather thong—the handle of the water bottle. One of the tied ends of the water bottle serves both as the mouth and spout of the vessel, while in the clay vessel these ends are completely stopped up, the water being poured in and out through the vertical part attached to the middle of the horizontal lower portion. The peculiar shape of the clay vessel is thus to be explained as that of half a lambskin (Fig. 17).

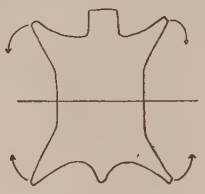


Fig. 17

Conclusion

We have here two vessels — the " churn " and the " bird " vase which are imitations of skin vessels. If we likewise consider the clay spoons discovered mainly at the Ghassulian stage,[5] which are doubtless also imitations of wooden spoons, we must conclude that we have here an interesting example of a widespread attempt at the time to make clay imitations of earlier utensils formed from skin or other organic matter. Considered in the light of the development of man's utensils as a whole this phenomenon serves as evidence of the way utensils developed with the invention of pottery, evidence which confirms the accepted theory of its origins and development. The theory states that all clay utensils originated

[3] Teleilat-Ghassul I, p. 108, fig. 57.
[4] E. L. Sukenik, J.P.O.S., XXI, pl. I:I.
[5] Teleilat-Ghassul I, fig. 55, pl. 44:55–58, 58.

as imitations of utensils made of animal or vegetable matter, such as gourds, osiers, goatskins and so on.[6] The phenomenon we have described serves as an irrefutable proof of the theory, being, it seems, one of the recurrent attempts at creating new clay utensils modelled on extant examples made of organic matter. These attempts had lasting results only when they could compete successfully as far as their utility and positive characteristics were concerned; in such cases the manufacture of these vessels was continued and was carried on in one form or another until today. In other cases, where vessels like the churn, the water bottle and the clay spoon could not, it appears, compete with wooden and skin products, they failed and disappeared.

[6] V. Gordon Childe, *Man Makes Himself*, p. 73.

REVIEWS AND NOTICES

The Zadokite Documents. I. The Admonition. II. The Laws. Edited with a Translation and Notes by Chaim Rabin, xvi, 96. Oxford University Press 21s.

In 1910 Dr. Solomon Schechter published the fragments of two remarkable documents that he had discovered in the Cairo *Genizah* some 15 years previously. His publication, under the title of *Fragments of a Zadokite Work*, made a great sensation in the world of scholarship. There ensued a lively discussion, in scores of contributions to learned periodicals, of various aspects of the documents in question. Their text was re-translated into English and freshly commented upon in Charles' edition of the Apocrypha and Pseudepigrapha of the Old Testament. Translations into French and German, likewise with copious notes, were published by Israel Lévi and Louis Ginzberg respectively. Scholarly work was at first mainly based on the text in Schechter's edition, as scholars had as yet no access to the two manuscripts in the Taylor-Schechter Collection at the Cambridge University Library. Conjectural emendations, with a view to elucidating the numerous obscurities of the text, were frequently resorted to also in the later editions based on photographs of the manuscripts. An edition of the latter kind, in the German series Lietzmann's *Kleine Texte*, appeared as late as 1933. By that time, however, scholars' interest in the subject was, on the whole, already waning. Many theories had been propounded as regards the source and background of the documents concerned. The sect reflected therein had been variously identified with one or another sect known from other quarters. None of those theories commanding general assent, there had arisen a stale-mate that seemed likely to remain permanent.

Scholarly interest in the subject received a new and powerful stimulus from the series of surprising discoveries commencing in 1947 that brought to light the extraordinary documents best known under the name of *Dead Sea Scrolls*. The discoveries, parts of which are even to-day only known by hearsay to the wider circles of scholars, occasioned a wide and complex divergence of views. Scholars differ widely regarding very nearly every aspect of the Dead Sea Scrolls. There are some few exceptions, however. One of them is the agreement among scholars, very nearly unanimous, that the sectarian documents among the Dead Sea Scrolls originate from a source identical with, or at any rate closely related to, the sect that produced the documents whose fragments were discovered and published by Schechter. Whilst the study of the Dead Sea Scrolls has considerably widened the range of scholars' knowledge about the sect in question, it is still to the Zadokite Fragments that they turn for information about many important aspects

of its ideology and history, especially for chronological data with precise figures that are entirely lacking in the other documents. It being generally agreed that there is a close and intimate connection between Schechter's Fragments and the sectarian documents among the Dead Sea Scrolls, there has been for quite a while a keenly felt desire that the former be re-investigated and re-interpreted in the light of information derived from the latter.

With his newly translated and annotated edition of the Zadokite Documents, Dr. Rabin has aimed to supply that want. His slim volume is packed with information presented in terse, precise and lucid language. The five useful index tables provided at the end of his book will especially enhance its value as a manual in the study of this exactingly difficult and obscure and, in many respects, exasperatingly involved subject. From the labyrinth of a widely ramified literature, the author has judiciously excerpted valuable suggestions for textual emendations and elucidating comments. Above all, he aims at a clearer understanding of his Text by adducing parallels to the phrases therein, partly pointed out by previous commentators and partly found by himself, from cognate literature such as the Dead Sea Scrolls and the better known Pseudepigrapha, from the Hebrew Bible according to its Masoretic Text and ancient versions, and from early Rabbinic literature. It is pointed out on the dust-cover of Dr. Rabin's book that " his commentary, in contrast to the notes of most earlier translations and editions, is principally philological." That limitation upon the scope of the work, is self-imposed by the author. Aware of the numerous controversial issues connected with the subject of his study, he makes the observation, worthy of the serious and conscientious scholar, that it is as yet " much too early to come to any conclusions about the date of the documents or their relation to other known movements or writings." He endeavours, in fact, throughout his book, to steer clear of controversies. On that score, the beginner in this field whose primary task must be to grapple with the difficulties presented by an exceedingly obscure and in parts probably corrupt text—a task that has so far proved intractable also to scholars of repute—will welcome Dr. Rabin's book as a precious *vade-mecum*. Scholars with definite views, on the other hand, are likely to find fault with the author for not having adopted interpretations that favour their respective particular views.

By the side of a great deal that deserves unstinting praise, the work under notice has flaws courting criticism. They are partly faults of omission and partly faults of commission. The author states his conviction that the first part of his Text is in its entirety " a mosaic of quotations, both from the Old Testament and other, now lost, writings, a clever presentation of *testimonia*, not a history of the sect." That is a remarkable case of the combination of two truths into a fallacy. All would readily concede that much of the part referred to, is a kind of a mosaic of quotations. It must also be admitted that the explicit quotations—from the Old Testament and from other writings, now lost, regarded by the sect as authoritative—coupled with their interpretations, are subtly presented *testimonia*, not a true history of the sect. Those

explicit quotations, however, are few and far between. Beside them, the Text abounds in phrases—or, as the author would have it, is in its entirety a tissue of phrases—that are borrowed or adapted in various ways from older authoritative texts. Those are by no means *testimonia*. They are but a sample of what is known as the " musif " style, a style commonly affected by Hebrew writers, in varying degress of skill, from hoary antiquity till the present age. That style, without any ulterior motives, is already used in I Maccabees and is still met with in the most recent phases of Modern Hebrew, in belletristic and other secular literature no less than in Rabbinic *responsa* and other traditional writings.

The author also makes insufficient use of the Masoretic Text in seeking the origin of phrases in his Text. For a parallel to the phrase on p. 11 line 14 " And now children hearken unto me ", for instance, he quite unnecessarily turns to the Pseudepigrapha and overlooks three obvious instances in Prov. v 7, *ibid.* vii 24 and viii 32. He also fails to notice that " the two houses of Israel ", p. 7, line 12, is lifted from Isa. viii 14. It is the same with " and they digged a well ", p. 111, line 16, lifted from Gen. xxvi 21; with " he shall not live ", p. 111, line 17, from Gen. xxxi 32; and with " that His anger was kindled against ", p. 11, line 21, from II Kings xxiii 26; to which many further instances might be added.

The author, rightly, draws attention to scriptural quotations that are not literal. He names them " quotations with grammatical adaptation to the context ; telescoped quotations, omitting something in the middle ; allusions or reminiscences " ; including in the last mentioned category " quotations of no more than two words ". As regards all those quasi-quotations—which are likewise not a sole peculiarity of his Text but are equally common in the various phases of post-biblical Hebrew—his omissions are still more numerous. Some of those omissions are glaringly obvious. That is the case with the long sentence on p. IV lines 18-19 " He who escapes from this is caught in that, and he who is rescued from that is caught in the third "—no less than 8 words in the Hebrew—a transparent allusion to Isa. xxiv 18. Similarly, characteristic phrases in the sectarian document, like " at the end of days ", " covenanters " [*ba 'ale berith*], " their names according to their generations ", " to cause Israel to turn away from God ", " if they will not observe to do ", *etc.*, are obvious adaptations of their biblical counterparts and in parts show Dr. Rabin's translation to be of doubtful accuracy. On the other hand, Dr. Rabin at times draws attention to biblical counterparts without real warrant. Phrases like " they that despise Him ", " against their congregation ", " and He caused them to hear ", *etc.*, consist of but single words in the Hebrew They are hardly reminiscences of biblical phrases but are simply due—like scores of other terms in the sectarian document—to the use of the Hebrew language as a literary medium.

The same applies to the author's method of seeking parallels in the ancient versions, which he rightly considers quite as important in that respect as the Masoretic Text. The instances he cites do not always appear fully

warranted. He is himself aware of the intrinsic difference between literal quotations and the above-mentioned quasi-quotations in his Text. The sectarian writer alters biblical phrases when adapting them to the grammatical requirements of the contexts in which he uses them. The forms resulting from such adaptations may at times fortuitously coincide with those presupposed in the ancient versions. If Dr. Rabin nevertheless finds in his Text parallels to the supposed Hebrew *Vorlage* of the ancient versions he might with equal right find the same in the biblical mosaic in other writings, say recent *halakhic* writings or Modern Hebrew poetry, whose authors had assuredly no access to the ancient versions' supposed Hebrew *Vorlage*.

Of a rather serious nature are the shortcomings of Dr. Rabin's book as regards the interpretation of *halakhic* rulings in his Text. He repeatedly states that the sectarian prohibition of polygamy and marriage between uncle and niece is based on the *Rikkub* theory which, he says, was propounded by Anan the Karaite heresiarch. In fact, the *Rikkub* was first propounded some time after Anan. Nor has the *Rikkub* anything to do with the incest laws in the Zadokite Documents. The *Rikkub* is the *reductio ad absurdum* of *halakhic* inferences from the phrase in Gen. ii 24 that a man and his wife are "one flesh". According to the *Rikkub* theory, the successive husbands of a woman are "one flesh" to the extent that all blood relations of each are disallowed to all the blood relations of all the others. For if Mr. A and his wife are "one flesh", and Mr. B subsequently marrying that same woman becomes "one flesh" with her, it follows with mathematical necessity that Mr. A. and Mr. B are "one flesh"; consequently, any brother or sister of Mr. A is disallowed to any sister or brother of Mr. B. A more extensive scale of the same obviously applies in the case of a woman successively married to more than two husbands. It likewise applies, *vice versa*, in the case of one husband with several wives. Of all this there is no trace whatever in the Zadokite Documents. Their prohibition of marriage between uncle and niece is derived from Lev. xviii 13 with the application of Analogy [*hekkesh*] which, whilst likewise a sectarian notion not admitted by Rabbinic Judaism, is distinctly different from the *Rikkub*. As for their prohibition of polygamy, it seems derived from Lev. xviii 18 according to the well known Karaite interpretation of *'isshah 'el 'aḥothah*="a woman unto her sister", as "one [woman] unto another." Even according to the view of Ginzberg—as approvingly quoted by the author, although open to question—that that law is derived by combining Lev. viii 18 with xviii 16, the principle involved is not *Rikkub* but merely Analogy.

A similar case of inaccuracy is seen in Dr. Rabin's treatment of the section on Oaths. Whilst his Text deals with oaths taken before judges, he cites as *mishnaic* parallels cases of "deposit-oaths" which in the *Mishnaic Halakhah* are of an altogether different nature. In his quotation of "one in the street" [*'eḥad ba-shuḳ*] from Mishnah Shabu'oth viii 4, he had the misfortune of alighting on a faulty text. The correct reading is "one from the street" [*'eḥad min ha-shuḳ*]. As evident from the context, without the shadow of

doubt that term has nothing whatever to do with oaths. " One from the street ", or " . . . in the street " according to the corrupt variant, denotes " a stranger ", *i.e.*, a person other than a depositee, whose obligations do not arise from perjury.

Inaccuracies of this kind, of which the aforegoing are not the only instances, would have been very difficult indeed to avoid within the narrow limits Dr. Rabin set himself. In view of the difficulties caused by subtleties of *halakhic* notions, his presentation of them is on the whole admirable. The same cannot be said of his occasional digressions to matters but slightly connected with his Text. His claim, for instance, that the sect did not believe that the Torah would be set aside at the end of days, rests on his somewhat doubtful interpretation of his Text in the sense of the general *talmudic* view on the subject. When he proceeds to interpret certain *talmudic* passages in the sense of the opposite view that the validity of the Torah would cease in the present physical world, he seems to turn things upside down. In this he follows, rather uncritically, the eminent thinker Rabbi Dr. Leo Baeck, in whose name he ascribes that view " *also* to Paul " [the italics are the reviewer's]. The fact is, *pace* Baeck, that that view is fundamental to " the faith of Paul " whilst his—Baeck's—interpretation of the *talmudic* passages concerned is unwarranted.

Turning now to Dr. Rabin's general conclusions regarding his Text, one likewise finds flaws by the side of much that deserves unstinting praise. His combination of Schechter's partly overlapping two fragments A and B into what he seems to regard as a " critical text ", is ingenious. Yet it fails to convince. To a large extent, Texts A and B do indeed run parallel. In some respects, however, they distinctly part company. Dr. Rabin assumes that whatever material is preserved in only one of the Texts, necessarily presupposes a lacuna in the other. In dovetailing the two Texts he at times does violence to both of them alike. By the same right, one might dovetail the Books of Samuel and Kings with the Books of Chronicles or I Maccabees with II Maccabees. The fact is, those respective books, whilst containing a great deal of material that ultimately rests on identical sources, are distinct documents. The same applies to Schechter's Texts A and B. The exact relationship between them cannot be established by Dr. Rabin's rough and ready method.

On the other hand, assent is commanded by his proposition that Text A consists of two distinctly different documents, which the scribe happened to copy out in the same book. In view of the affinity, linguistic and ideological, between those two documents and the Dead Sea Scrolls, the author suggests that the former be likewise marked by the letters DS. He accordingly names the first of those documents Admonition [DSA] and the second Laws [DSL].

With his work, despite its shortcomings, Dr. Rabin has rendered a signal service to scholarship. Those aware of the vast literature on the subject, the pitfalls which even great men like Schechter did not invariably succeed in avoiding, will know how to appreciate the wide reading, fine linguistic sense and meticulous care displayed by the author in his work. Falling short of

being the last word on any of the problems connected with the Zadokite Documents—which the author himself hardly intended it to be—the work is as good an introduction to the subject as has ever been written on it.

E. WIESENBERG.

Everyday Life in Babylon and Assyria. By Georges Contenau. Translated by K. R. and A. R. Maxwell-Hyslop. Edward Arnold, 1954. pp. 324. 24 plates. 25s. 6d. net.

Professor Contenau needs no introduction to English students of archaeology. His great work, the *Manuel d'Archéologie orientale*, is a classic. It is, therefore, most welcome to have his excellent popular book *La Vie quotidienne à Babylone et en Assyrie* available for English readers in an equally excellent translation. It happens too often, unfortunately, that a foreign work of importance is translated by someone who is not familiar with the subject matter of the book. Professor Contenau is fortunate in that Mrs. Maxwell-Hyslop is herself an archaeologist of distinction and well acquainted with the special field covered by his book. Furthermore, Mr. and Mrs. Maxwell-Hyslop have produced a lucid and very readable translation of a fascinating book, and have added to its value for the English reader by useful footnotes, and by an excellent classified bibliography. They are also to be congratulated on having been able to secure such illuminating illustrations. It would be unreasonable to expect completeness in what is a selective bibliography, but Ebeling's *Aus dem Tagewerk eines assyrischen Zauberpriesters* might have been included, and also Professor V. G. Childe's *Man Makes Himself* for its chapter on Babylonian mathematics.

The author has chosen the third and final period of Assyrian ascendancy as the representative period for his survey of every aspect of Assyro-Babylonian civilization, but he has given sufficient references to earlier stages of that civilization to give the reader some idea of its development throughout the centuries. As the book is intended for the general reader rather than for the scholar, the documentation is sufficient to indicate the most important and easily accessible sources of information. From the encyclopaedic nature of the book, some aspects of the Babylonian way of life are treated somewhat perfunctorily. For example, the reader in search of information about the great festivals which played such an important part in Babylonian life may be disappointed to find the New Year Festival dealt with so summarily. The famous Babylonian Job, as the text *ludlul bel nimeqi* has been called, is dismissed in five lines. On the whole the material aspects of Assyro-Babylonian civilization are more amply treated than the religious and spiritual aspects. Nevertheless, in spite of these minor defects the book is a magnificent synthesis of the essential characteristics of one of the world's most remarkable civilizations set forth with all the scholarship and lucidity which we have come to expect from so eminent a scholar. The translation is worthy of the highest praise, and the publishers are to be congratulated on the admirable production of the book.

S.H.H.

Lachish III (Tell ed-Duweir): The Iron Age. By Olga Tufnell, with contributions by Margaret A. Murray and David Diringer. i, Text; ii, Plates. (Oxford University Press, 1953, price 8 gns. net).

Every student of Palestinian archaeology must have observed with sorrow that, for one one reason or another, none of the more ambitious campaigns of excavation carried on between the world wars has entirely fulfilled the expectations with which it was started. In no instance is this more to be deplored than in that of the Tell ed-Duweir excavations, brought to an end by the outbreak of war soon after the tragic death of J. L. Starkey, under whose leadership they promised such brilliant results. It is sad to read of the eventual raiding and burning of the camp by a band of marauders.

When the end came the chief task on the Tell was only beginning, the preceding seasons having been mainly occupied in clearing ground for dumps, incidentally bringing to light important cemetery areas as well as the Fosse Temple published in Lachish II. The present volumes deal with such remains of the Iron Age as had been excavated on the Tell and with the burials of the same period. Miss Tufnell's devoted labours have succeeded in turning to excellent account material which must at first sight have seemed singularly unpromising and one looks forward to her forthcoming publication of the Bronze Age finds.

Where much industry has been devoted to good purpose any fault-finding may seem ungracious. But apart from such minute points as the misprint Septimus Severus (p. 164) and the dating of a coin of Titus (Coin List no. 56b) a century too late, there is a general criticism which can fairly be levelled at this publication. It is true that the records of an excavation should be as complete as possible and that it is an author's duty to go thoroughly into the minutest detail, but on the other hand, when once these obligations are accepted due regard ought surely to be paid to economy of time and money. In the present case one cannot help feeling that a substantial reduction in the length of the text might have been achieved by a more succinct treatment and by the avoidance of some repetition. Perhaps the present reviewer would not have felt this so strongly if he had not found the width of the page as printed extraordinarily fatiguing to the eyes.

Preliminary soundings at the north-east of the eighteen-acre Tell had discovered Bronze Age remains under a thick layer of ashes close to the surface, but on the west side the Iron Age occupation was represented by about 7 metres of deposit. The excavators did not find any floors in their trench, but by means of a minute analysis of pottery fragments they succeeded in distinguishing five Iron Age levels; the underlying Level VI showed signs of having been destroyed by fire at the same time as the Fosse Temple, perhaps in the reign of Rameses III. The parallel series of tombs was of assistance in enabling dates to be assigned to the Iron Age levels. It appears that after the destruction of Level VI the site was, at least partly, deserted and that the reconstruction in Level V was not earlier than 1000 B.C. The

next two levels may cover the period 900–700 B.C., the destruction of Level III being attributed to Sennacherib's invasion. Level II lay under a thick layer of ashes and it seems almost certain that it was destroyed by the forces of Nebuchadrezzar in 586 B.C. There is no trace of rebuilding until after the period of the Exile and Level I may be dated about 450–150 B.C.

The text goes into great detail. After 41 pages of introductory matter Part I consists of two chapters, Survey of Results and The Cultural Background; Part II (The City) comprises four chapters (100 pages) describing the stratification and buildings—including fortifications—on the Tell; Part III (chapters 7 and 8, pp. 171–254) deals with the Iron Age finds from the adjoining areas in which there were numerous tombs and graves. The pottery and other objects receive very full treatment in Part IV, chapters 9 to 13, and it is this section which must be regarded as the most valuable part of the publication.

Particular attention must be drawn to Miss Tufnell's chapter on the pottery (pp. 257–323) which is a masterly exercise in classification. She has had at least 3,136 vessels to deal with and as many as 700 types—drawn on Plates 79 to 104—to arrange in classes and subdivisions according to function and shape. Due stress is laid on the treatment of the surface of bowls and other vessels; in the almost complete absence of painted decoration the transition from hand burnish to wheel burnish is accepted as the most valuable guide to chronological development. Relying on the evidence from Samaria, Miss Tufnell inclines to the view that wheel burnish did not come into general use till about 800 B.C. and that the suggested dating of Stratum IV at Megiddo, 1000–800 B.C., may be too early. Immense industry in seeking out material from other sites—not only those of Palestine—for purposes of comparison is a notable feature of the author's method and is well exemplified in her study of pottery; we may note in particular the treatment of folded-rim bowls (class B.13), water decanters (J.8) and Cypriote or Cypro-Phœnician juglets (D.6a).

The following chapter is by Dr. Diringer, who presents " the quintessence of expert opinion based on a lively discussion over more than a decade " concerning the ostraca originally published by Professor Torczyner in Lachish I, with the addition of three (nos. XIX–XXI) found in 1938 and not included in that volume. Dr. Diringer also discusses the Hebrew stamps on jar-handles and with reference to the three classes into which he divides the royal (*la-melekh*) stamps on epigraphic grounds he would be inclined to attribute the latest class to the time of Josiah, but there is some doubt whether all examples of that class from the Tell can be later than the destruction of Level III in 700 B.C. At all events the great majority of the royal stamps came from Level III.

A brief Aramaic inscription of the 5th or 4th century B.C., on one of a number of limestone altars found in a cave, is discussed (in French) by Professor A. Dupont-Sommer, who offers a tentative rendering that suggests

an offering of incense (*lebonta*) to Yahweh, an interpretation rejected by Professor Albright (B.A.S.O.R. 132, p. 47). Dr. Margaret Murray is responsible for a chapter on Hieroglyphic and Ornamental Seals, some of which though found in Iron Age surroundings are obviously datable to the Middle or Late Bronze Age. G. M. FitzGerald.

The Committee have to acknowledge with thanks the following :—

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